The Effectiveness of Career Awareness Workshops with Fifth Grade Girls

Jane M. Podall
Loyola University Chicago

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THE EFFECTIVENESS OF CAREER AWARENESS WORKSHOPS WITH FIFTH GRADE GIRLS

by

Jane M. Podall

A Thesis Submitted to the Faculty of the Graduate School of Loyola University of Chicago in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy

June

1977
THE EFFECTIVENESS OF CAREER AWARENESS WORKSHOPS WITH FIFTH GRADE GIRLS

The purpose of this study was to investigate the effectiveness of regularly scheduled workshops designed to decrease the sex-role stereotypic perceptions of fifth grade girls. An impetus to the study was the changing social environment in which a wider variety of occupations are becoming open to women and at the same time self-expectations and choice of occupations have remained largely stereotypic.

The principal hypotheses were concerned with whether girls exposed to the workshops (in contrast to a control group) became less stereotypic in their perceptions of sex-role in occupations, whether the girls improved their self-concepts, and whether maternal employment is correlated with sex-role perception.

The sample consisted of 169 fifth grade girls enrolled in suburban public schools in essentially similar socio-economic environments. Approximately two-thirds were randomly assigned to participate in weekly discussion groups with an adult leader. Nine workshops with 10 to 12 girls in each met for one hour per week, for eight weeks, during the school day. The remainder did not participate in any special activity during this phase.

Moderately structured lessons and assignments served as stimuli for the group discussions. These tests included listing career aspirations, discussion of roles of women, occupational role playing, value voting, and collecting occupational pictures for a bulletin board.
To measure the factors of sex-role stereotypy and self-esteem upon termination of the workshop, all girls were given the Wiechel Sex-Role Perception of Task Test (WS-RT) and the Sears Self-Concept Inventory (SS-CI).

This American adaptation of the WS-RT, which had been developed in Sweden, was its first use in the United States. Other measurements subjected to statistical methods were ratings from teachers' reports, parents' reports, and group leaders' weekly records of subjects' participation.

The first use of the WS-RT with American subjects was successful; the moderately adapted content and format were easily understood in this environment. The results of the Wiechel subtests and the composite score indicated that participants in the workshop, in contrast to nonparticipants, significantly modified their sex-role perceptions in the direction of reduced stereotypy. None of the other hypotheses was supported; i.e., the workshops effected no change in self-concept, and no relationship between sex-role stereotypy and maternal employment was detected.

The principal implication of the study is that a workshop of relatively short duration conducted in a school environment by adult leaders can be an effective way of decreasing sex-role stereotypy in girls. Comparison with the literature suggests that it may be a better method than classroom instruction by regular teachers.
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VITA

The writer was born in Chicago, Illinois. She attended the University of Illinois in Urbana, earning a Bachelor of Science degree in Psychology in 1948, and National College of Education in Evanston, receiving a Master of Education degree in Guidance and Counseling in 1965. Her studies at Loyola University of Chicago toward a Doctorate in Guidance and Counseling were begun in 1971.

The author taught fifth grade in Highland Park between 1961 and 1965, and was an elementary school guidance counselor in 1966-1967. In 1968, she became certified by the State of Illinois as a School Psychologist and in 1972, passed the qualifying examination for Psychologist Registration in Illinois; she has been in private practice as a psychologist since that time. The writer is on the staff of the Learning Disabilities Center of Mount Sinai Hospital in Chicago. She has taught courses in Tests and Measurements at Loyola University and has conducted instructional counseling groups for women at Oakton Community College in Morton Grove, Illinois.

For many years, the author has been concerned with issues in the fields of education and mental health. She is a member of the American Psychological Association, American Orthopsychiatric Association, and Illinois Psychological Association.
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CHAPTER I

INTRODUCTION

Background of the Study

The concept of "sex-role stereotyping" has received a great deal of attention in recent years. Beginning with basic physiological differences at a person's birth, society, through its institutions, has had clear expectations and "multiple forces at work to mold these expectations into reality."¹ Both those persons being stereotyped and others whose expectations lead to stereotypic perceptions are adversely affected. These attitudes and beliefs, largely "unconscious," have been accepted implicitly and transmitted by virtually all members of society.

As part of an effort to overcome the sex-role stereotype there is currently a massive attempt to expand educational and occupational opportunities for females. Interest in this trend has developed from several sources. It is partially an offshoot of the liberal, humanistic philosophy of the 1960s, when women became aware of themselves as a

group being discriminated against in academic, career and social areas. Women have also been motivated as a result of economic need and new awareness of the power of groups to change existing conditions. A third source has been the internal push for self-actualization in an affluent society where many basic needs appeared to be satisfied.

Readiness for Change

Social change since the 1960s has resulted in a wider variety of occupations and life-style options open to women. It is believed that there will be even more opportunity for choice in the future. Girls and women will need to be prepared through education and training to take advantage of the extended opportunities.

As the movement toward equality and active participation in the mainstream of life activities intensifies for females, it is increasingly necessary to recognize its

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relationship to the lives of girls. Presently, many women have not been sufficiently prepared to assume increased responsibility for themselves. Attitudinal changes occur slowly and many women have been reared in an environment which replicates the same belief as that of their mothers—that to be feminine, one must remain passive and deferent, especially as these traits affect occupation and marriage.

The women's movement is not new. It is actually a resurgence of earlier sporadic efforts in the direction of role equality. The present variation has been implemented, however, by technological-scientific knowledge and more acceptance of women's equal role by the established culture; to some degree society is increasingly tolerant of women's departure from conventional roles. 6

Many women are currently examining their traditional roles and opportunities in order to extend life choices. They are at a point where they wish to claim the equality which has heretofore generally been denied. The present direction of assertiveness in educational, occupational and personal relationships seems more sustained than formerly, although many women are still ambivalent about the conditions which reinforce traditionally limited situations.

One effect of the trend is that more women will begin to take risks which would uncover existing or latent

potential. However, in taking the initial step toward individual fulfillment, internal psychological conflicts must be diminished in order that energy may be applied for productive purposes. Failure to take the steps necessary to overcome these conflicts may lead to more serious maladjustment. Maslow commented, "I have seen many women, intelligent, prosperous, and unoccupied, slowly develop symptoms of intellectual inanimation." 7 He was also describing the apathy found in "existential neurosis," as was Glasser when he noted that the most common characteristic of delinquent girls was "hopelessness." 8, 9

Despite an increase in educational-occupational opportunities for females, self-image and vocational goals have remained stereotypic and below that of similar characteristics for males. One object of this research is to determine the extent that awareness of career and life-style alternatives may be augmented at the selected age-grade stage, to prepare for continuing education, and to increase the ability to make responsible vocational choices at a later stage.

Hefner, Rebecca, and Oleshansky present a three stage model that augments earlier theories by allowing for "sex-role transcendence" in which a flexible orientation to life

7 Maslow, Motivation and Personality.
need not depend upon gender assignment. Behaviors, occupations, and life-styles are chosen which are appropriate and adaptive for the particular individual in the specific situation. An educational system which uses this model will prepare individuals to choose adaptive, personally meaningful strategies, rather than force them into "conforming" behaviors.

Hefner et al. contend that the transition between Stage I (undifferentiated) to Stage II (polarized) is a gradual learning of role distinctions between the sexes, attendant values, reward structures and cultural associations. The present study will be concerned with the third issue, namely, one method of overcoming the polarization, i.e., accomplishing the transcendence.

The transition to Stage III (transcendence) is as yet unaccompanied by enough cultural reinforcement through modeling, imitation and role playing; this lack of assistance makes it all the more difficult to accomplish and creates a more dramatic shift when it does take place. Within the past few years, however, some support has been contributed through channels such as consciousness raising groups and feminist publications. In a public school environment it is difficult to introduce consciousness raising methods; the method of the

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present study was to utilize the career awareness group for similar ends.

The book, *Sexism in School and Society* by Frazier and Sadker, presents a strong point of view that the schools perpetuate the sex-role stereotyping which was initiated in the home. A significant difference exists in the greater protectiveness shown by parents to girls, and the greater number of restrictions and controls of female children. Boys, on the other hand, are subject to higher expectations and greater achievement demands. Within the area of the school, a number of new activities could highlight sex-role stereotyping issues and serve to guide the equal opportunity movement in a more positive direction. One area suggested could be through the topic of career education, where in small discussion groups students might meet to explore changing sex-roles and behavior and how, individually and collectively, they may be reinforcing stereotypic patterns. In such groups, through a moderately structured approach, topics such as educational opportunities and training, occupational and career goals would be introduced. The movement toward androgynous roles and careers could be developed. A redefinition of women's role and resultant changes, as well as combining a career with marriage could be introduced and role-played with examples discussed. The participation of girls in sports is

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currently a high interest topic in school. Simultaneously, groups could be formed within a school system for teachers, counselors and parents (who are strong role models for the children), who wish to re-examine their own attitudes and behavior, and suggest possible remedies which could be implemented within the school district.

Relationship of Awareness Development to Guidance and Counseling

Educators in general and counselors in particular are in a unique position. If the consciousness of counselors is raised, they will be able to communicate readily with students, school staff, and parents concerning life choices based on ability and interest and not on gender. Counselors, teachers, school psychologists and social workers who have had training in child development and experience with groups can be the "key" people who integrate a less stereotypic climate within the school.

Regardless of their specific discipline, these professionals agree that the best learning environment is one in which the student feels comfortable, where there is some structure, reassurance, goal setting, and opportunity for student (or group) interaction. It has been established that guidance and counseling techniques are effective tools for
imparting information and changing behavior.\textsuperscript{12,13,14,15,16}

It is logical, therefore, to choose these methods for transcending role stereotypes. The dynamic qualities in the interaction of students in a setting where there is high regard for the individual would be important components for understanding and potential change.

Additionally, the teacher-counselor must feel comfortable with the group, subject, material being discussed, and techniques which would provide the best learning experiences for the group. Students in such a setting, whether the topic is history, poetry, arithmetic, or occupational information, learn to reason and make their own informed choices. The environment should reflect genuine concern for personal opinion and the capacity of the individual to solve her/his own problems.

\begin{itemize}
\item \textsuperscript{12} R. Dreikurs, *Psychology in the Classroom* (New York: Harper & Row, 1957), pp. 50-64; 159-230.
\item \textsuperscript{13} R. H. Byrne, *The School Counselor* (Boston: Houghton-Mifflin Co., 1963), pp. 29-49.
\end{itemize}
Interrelating with other individuals or in groups contributes in a facilitative, positive way to growth, development, and maturity.\textsuperscript{17} The assumption is that being involved in a helping relationship with a counselor, group leader, teacher or therapist, the individual will be able to express her/his latent inner resources. According to Rogers, the helping relationship is one where at least one of the parties has the intent of extending improved functioning and coping behaviors in the other, and as such, describes the intent of teachers, parents, and group leaders.\textsuperscript{18} Carkhuff's analysis of the counseling-teaching relationship which begins with self-exploration and involves understanding, appropriate response, taking initiative, and engaging in constructive action is a similar process.\textsuperscript{19} Self-understanding, better communication with others, and facilitating new behaviors are goals.

This philosophy is integrated in the group phase of the experiment.

\textsuperscript{17}Shertzer and Stone, \textit{Fundamentals of Counseling}.


Importance of Self-Concept as a Psychological Factor

Although it has been fairly well ascertained that self-esteem in 9-11 year old girls in contrast to that of women in our culture, is very similar to that of boys, the sexes do differ in the areas in which they report greatest confidence. For example, girls traditionally tend to rate themselves higher in the area of social competence, while boys more often see themselves as strong and dominant. Differences in behavior and perceived competency in later years may be related to the fact that men have a greater sense of control over their destiny, based on early emphasis on self-reliance and achievement. For girls, interpersonal communal aspects of personality are fostered and agentic concerns with achievement and expansion are not encouraged.  

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The link between self-esteem and sex-role becomes evident in the larger context of the forces of socialization that derive from parents and culture. Since positive self-esteem is fundamental for healthy child development, and since such factors as competency, mastery, and personal appearance are contributory toward self-esteem, such factors should be nurtured in girls as well as boys and communicated through personal warmth. Evidence also indicates that discrepancy in perceived competency appears in later age stages of females negatively effecting self-confidence. A purpose of this experiment would be to determine whether feelings of competency and achievement in girls can be strengthened, so that the gap between the sexes does not appear in later years.

Under present practices of socialization, males and females diverge at later developmental stages when women at the "highest moral reasoning level" see themselves as more restless and impulsive. This, too, suggests a tendency toward agentic thinking for which women are ill prepared, and a


26Sears, "Relation of Early Socialization Experiences and Gender Role in Middle Childhood," pp. 269-271.

cause of diminished self-esteem at older ages. The sex-role definitions for women are narrowed by the socialization process and higher levels of ego functioning for women are more difficult, because individualization for women involves conflict with prevailing cultural norms. In view of the preceding research, the present study assumes that the self-concept of fifth grade girls is similar to that of boys in the same age range. Girls exposed to material which would encourage agentic development, however, will be more self-confident in areas of competency and achievement.

**Influence of Maternal Employment**

It is further suspected that the philosophy and behavior related to lifestyle of the mother (homemaker or employed) influences their daughters' sex-role stereotypy and self-esteem. As indicated by Hoffman, mothers who are dissatisfied with their role are more likely to cause changed patterns of behavior in their daughters. This concept might be carried a step further in the speculation that mothers' dissatisfaction could also lead to vocational diversity during one's occupational life span.

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In recent years, the wider choice of maternal roles and life-styles is recognized as being associated with similar variation in daughters' attitudes and behaviors. Another factor which may affect contemporary female attitudes is that while some women wish to continue in the traditional homemaking-child caring role, they may, through circumstances, be placed in the position of wage-earner. Other women may exercise more flexibility in combining marriage and career activities regardless of economic status; still others may only verbalize the need for individual choice without exercising this option for themselves.

The personality components and choices of mothers making occupational decisions would most likely have an increased influence on same sex children.

Purpose

The purpose of the study was to determine the effectiveness of a counseling-like experience on girls in an age range where attitudes would seem to be "susceptible to modification. More specifically, the modification techniques which utilized group process focused on psychological factors of self-esteem and sex-role stereotypy.

An associated purpose was to investigate whether one source of cultural influence such as maternal employment is related to these psychological factors.
Hypotheses

With the above considerations in mind, hypotheses to be investigated in this study are:

I. Fifth grade girls who have participated in career awareness workshops are significantly less stereotypic in their perception of sex-typed activities than those who have not participated in these discussions.

II. Fifth grade girls who have higher self-esteem as measured on the Sears Self-Concept Inventory, are significantly less stereotypic in their sex-role perceptions, as measured by the Wiechel Sex-Role Perception of Task Test, than girls with lower self-esteem.

III. Fifth grade girls have significantly higher self-esteem if they have participated in career awareness discussion groups than if they have not participated.

IVa. Fifth grade girls whose mothers are employed outside the home are significantly less stereotypic in their sex-role perceptions than those girls whose mothers have no outside employment.

IVb. Fifth grade girls who have participated in career awareness workshops and whose mothers are employed are the least stereotypic in regard to sex-role perception of task (most receptive to occupational-educational choices). This hypothesis is a combination of Hypotheses I and IVa and considers the possibility of interactive effects.
Rationale

The principal experimental factors subject to experimental control were: age, socioeconomic status, sex, geographic area, participation in time-limited groups, exposure to selected materials and tasks, and status of maternal employment.

The subjects for this study were fifth grade girls enrolled in suburban Chicago public school districts. The socioeconomic status of the girls' families was middle to upper-middle class. This selection sample was made for a variety of reasons. Sex-role and occupational identity have become highly conflicting issues for females today, and the need to modify traditional/cultural stereotypes must begin during childhood. The influence of early socialization is seen in girls whose affiliative needs are stronger than their achievement drives. High academic performance for girls may be compatible with affiliative motives in elementary school where academic excellence is rewarded with love and approval from parents, teachers and peers. However, this pattern of high achievement usually diminishes during adolescence when parent and peer pressure complete the sex-typed socialization process. What better time than in the elementary grades, to present information about a variety of occupations and the

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self-knowledge with which to make a responsible career choice when the time arrives?

Fifth grade girls were also chosen as subjects because of the dearth and inconsistency of occupational knowledge among girls in this age group. At present, when there has been an increase of information concerning women's independence, it is important to know how much the media has influenced children in the 9-11 age range. Coopersmith's and Sears' data indicated that conditions which foster identity development also facilitate a more positive self-concept. Since transcending traditional role models for more active ones is difficult for adolescent and adult females, this would appear to be an appropriate stage at which to present alternatives. For girls, these years represent an important transition in the development of sex-role identification; girls are more likely to consider and broaden their future career options when significant adults (female role models appear to have somewhat more influence) are positive and supportive.

This study indicates that until approximately junior high (sixth grade) girls and boys do equally well in their acquisition of quantitative concepts, arithmetic skills, visual-spatial tasks and verbal abilities. At about age eleven they begin to diverge, with female superiority increasing through high school in verbal tasks, and male superiority on visual-spatial tasks and in mathematics. School rated achievement and even interest in academic subjects
appears to decrease in girls during the high school period, with fewer girls willing to pursue excellence in scholarship in college and beyond.

Yet another reason for choosing fifth graders for this research area was based upon cognitive and school experience at this age. These youngsters have attended school for some years, are able to read, express themselves verbally, are moderately independent and can usually identify with the social situations portrayed in the group and on the tests. Although self-concept is fairly well established by ages 9 and 10, this age is crucial since children still retain pliability in regard to ideology, peer influence and alternative occupations. Within this age range the sense of identity is still fluid and has not stabilized. Identity, according to Erikson, involves a structural synthesis and re-synthesis of childhood identifications and experiences. The fifth grader is not yet faced with physiological changes and the demands of adolescence.

If the children have indeed absorbed sex-typed socialization, but remain susceptible to reeducation, the problem remains to find techniques which will bring about change. Leaving the children free to choose their own activities and

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playthings would merely provide a setting for reinforcement of their tentative socialization. It appears that some type of active intervention is necessary. In this study, a format consisting of teacher-counselors using structured techniques was employed. This choice was justified from the work of Jacklin and Mischel and Wiechel.33,34

With respect to the factor of maternal employment, it was hypothesized that girls of employed mothers were less stereotypic in their sex-role perceptions than those girls whose mothers have no outside employment. This is based on research that employed mothers have transmitted attitudes of greater flexibility in regard to life style than the more traditional mothers, and that mothers are a strong influence as role-models for their daughters. In this vein, Hoffman and Nye theorized that the least stereotypic attitudes would be found among girls who had participated in career awareness workshops and had employed mothers.35 Detailed information, other than simple status of employment, was unattainable in the present study, because school districts considered further follow-up a violation of parental confidentiality.


School districts for this study were selected from a suburban area among a middle to upper middle class population. Due to limitations of time, it was considered important to restrict population diversity and confine the research to a relatively homogeneous group. To have included an inner city population might have introduced vocabulary limitations, inhibition of verbal fluency, and complicated the influence of maternal employment. Furthermore, the major test vehicle was developed on a population of middle class Swedish children and its applicability to economically disadvantaged children is doubtful.

Validation of Test Instruments

A study was performed with students comparable to the sample population prior to the outset of the main research. The purpose for the validation study was to pretest the test instruments. The Wiechel Sex-Role Perception of Task Test (WS-RT) (Appendix A, p. 123) and the Sears Self-Concept Inventory (SS-CI) (Appendix C, p. 148) were used to establish content validation for the WS-RT and local norms for both measurements which would aid in understanding students in the study. It was important to perform a test of content validity with the Wiechel, since this measurement had been developed in Sweden and this was its first use with American students.

The validity study students were similar to those students used in the main experiment in terms of age and
socioeconomic status.

Terminology Defined

Terms used in the hypotheses and within the discussion may need definition as to their special usage within the context of this paper. Definitions for these terms are as follows:

1. **agency-agentic** - A fundamental characteristic of a person as manifested in self-protection, self-assertion, and self-expansion. This involves vitality and activity similar to the organism's drive for homeostasis in that viability for the individual and for society depends upon integration of both agency and communion (see definition below).

2. **androgyne** - A combination of male and female qualities in all people; situational and personal flexibility in terms of social and vocational roles.

3. **communion** - Characteristic of the human personality to integrate and become one with others to achieve comfort.

4. **existential neurosis** - A term first used by Maddi to describe feelings of meaninglessness, alienation and apathy with little sense of purpose or control over one's life.

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37 Ibid.

38 Maddi, "The Existential Neurosis."
5. **identity** - Perception of self as a distinctive individual; distinct from others. Sexual identity will mean the learning of a sense of self in which there is recognition of gender secure enough to manifest human qualities in society. 39

6. **self-actualization** - The discovery and application of existing or latent potential in individuals, based on one's having met and satisfied basic life needs. 40

7. **self-concept/self-esteem** - The self-concept may be thought of as an organized configuration of positive and negative perceptions of the self which are admissible to awareness. 41 Self-esteem is self-regard or respect based on self-concept and may have a positive or negative value.

8. **sex-role/sex-type** - A part or kind of behavior, activity or occupation associated with either male or female conduct only.

9. **sex-role stereotypic perception** - Knowledge or cognition which attributes specific formalized behavior or activity to either gender.

10. **sex-role training** - Preparation for carrying out tasks considered (traditionally) appropriate for one's sex.

11. **stereotype** - A formalized, firmly fixed custom or thought.

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39Block, "Conceptions of Sex-Role: Some Cross-Cultural and Longitudinal Perspectives."

40Maslow, *Motivation and Personality*.

41Rogers, *On Becoming a Person*, pp. 256-258.
12. **transcendence** - To go beyond defined limits. Applied to sex-role, to go beyond defined stereotypic sex-roles, implying personal and situational flexibility.

**Limitations of the Study**

Limitations seem closely associated with human variability during all phases of the experiment. These limitations have been identified and explained below:

1. The sample population consisted of 103 fifth grade girls in the experimental group and 68 fifth grade girls in the control group from four suburban school districts north of Chicago. Although care was taken to obtain school districts equivalent in curriculum trends and economic status of families, some differences between districts were noted. The variations in separate neighborhoods caused by ethnic and economic uniqueness may have contributed to fluctuations in data on a district basis.

2. Although care was exercised in selection of six group leaders from a total of fifteen applications, variation in leaders' skills, personalities and experiences could have contributed to variation in performance between the experimental groups. In an effort to provide background and eliminate and/or modify distinctiveness between leaders, special orientation meetings were convened to prepare leaders with background material, expectations for group development and techniques appropriate for children of this age range. Additionally, processing meetings were held periodically during
the eight weeks to deal with problems and situations which appeared in the weekly meetings from the fifth graders. Nevertheless, this did not eliminate the distinctiveness of leaders entirely and individual emphases very probably had some effect upon later test results.

3. Despite random selection of girls among the fifth grade students in participating districts, it was necessary to consider school schedules with regard to time and arrangement of weekly meetings. Consequently, it was more expedient to use the enrollment of entire class sections to comprise either experimental or control groups. Since there were no "track" systems and classes were heterogeneous in terms of students' ability, the only limitation would be the influence of the home room teacher on entire groups; it is possible that reinforcing or negative attitudes of the teacher (outside of group meetings) might contribute to differences in final test scores.

4. In an attempt to obtain somewhat detailed information from parents with respect to maternal employment and educational history, questionnaires were distributed to the girls' parents. Unfortunately, the responses were not uniformly complete. Although in the early planning stages of the experiment it appeared that permission to follow-up the parent questionnaire would be granted, ultimately it was not. The best analysis that could be made was one that classified the mother only as "employed" or "unemployed," i.e., did not differentiate factors such as part-time vs. full-time,
necessary vs. optional, and kinds of employment.

Summary

Chapter I has presented an introduction to the study, rationale, and statement of the problem. It advanced the point of view that society is changing and that the status of women is changing relative to role equality with men. It has been indicated that it is not sufficient that there be increased job opportunities, but that women must be made increasingly aware of these opportunities. This chapter stated the purposes and hypotheses of the experiment.

The following section, Chapter II, will cover related research which is pertinent to the present study, related to child development, group process, and issues concerning women's roles. Chapters III and IV explain more specifically topics introduced in the first chapter—methods and procedures used and results of the experiment. Chapter V will present a summary of previous chapters, conclusions, and recommendations for further experimental studies. Appendices and tables are included to more fully explain the various phases of research, tests used and statistical data.
CHAPTER II

REVIEW OF THE RELATED LITERATURE

Introduction

The purpose of this investigation of related studies was to determine the type and direction of research being done in the area of sex-role stereotyping in the elementary school. A review of the literature provides a multiplicity of topics associated with sex-role behavior in the United States and in foreign countries as well. Until recently, studies specifically concerned with elementary school children were almost non-existent, the few available having focused on college undergraduates and nursery age children.

Areas of research considered relevant and applicable to the fifth grade student will be discussed under the following categories: (1) age-related studies, (2) self-concept studies, (3) sex-role stereotype research, (4) school awareness groups, (5) maternal employment, and (6) fear of success and other culturally reinforced patterns.

Age-Related Studies

The focus of the review is the 9-11 year age range which is the subject age in this study. Fifth grade children are generally in this group. Intellectually a child
of this age has both the experience and ability to apply asso-
ciative or abstract reasoning to verbal and non-verbal sit-
uations. By fifth grade, youngsters have been exposed to the
school environment for a sufficient time to be aware of stan-
dards for achievement, competition, division of time and so-
cial behaviors. Hilton reported that at grade five there
were no differences in achievement in mathematics between the
sexes, but thereafter the boys pulled ahead.¹ This seems to
concur with the Asher-Markell article with regard to the
child's perception of mathematics (or reading) as an inter-
esting subject that is likely to be helpful in earning a liv-
ing.² Asher and Markell found that sex differences in read-
ing achievement narrow between elementary and high school;
they speculated that fifth grade boys are transitional in
their development and more likely to be influenced by the in-
terest level of the material than at an earlier or later peri-
od. Additionally, it was found that boys were more familiar
with reading vocabulary when exposed to high interest topics.
The implication of this result is that girls too, for the
present study, would be more interested in science and mathe-
matics if these subjects were meaningful and socially accept-
able. This conclusion has also been supported by Asher and

¹T. L. Hilton, et al., "Sex Differences in Math Achieve-
ment: A Longitudinal Study," Journal of Educational Re-

²S. R. Asher and R. A. Markell, "Sex Differences in
Comprehension of High and Low Interest Reading Material," 
Journal of Educational Psychology, 1974, Vol. 66, No. 5,
pp. 680-687.
A study by Lee and Wolinsky suggested that in the classrooms, female teachers were more evaluative than male teachers and that boys were evaluated more than girls; it also concluded that teachers generally favor children of their own sex in leadership assignments and other roles.  

The preceding two results governed the present study in the following ways: the design called for women leaders and "high interest" topics in order to maximize the chance that an attitude change could be effective.

In their most recent work, Maccoby and Jacklin found the sexes were very similar in both verbal and mathematical abilities until about age 11, when girls become superior on verbal tasks and, at age 12, when boys' mathematical skills increase faster than girls'.  On visual-spatial tasks, Maccoby and Jacklin found no male superiority in childhood, but males improved in this area in adolescence and adulthood. They explained that "an individual's sex is both a biological and social fact" and that biological "predispositions" interact with social experience to shape the psychological makeup

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of a person. Further, since performance is so similar prior to adolescence, variations may be caused by the culturally stereotypic training and expectations that differ for youngsters and the kinds of toys and activities to which they are introduced in early childhood. Intensification of these patterns in later development may be linked with biochemical changes and reinforced social acculturation.

Most studies concur that there are fewer stresses and demands during middle childhood than in adolescence; it is a period of relative stability in academic and social activities. The concern with identity becomes more acute during adolescence because of the necessity of coping with physical, physiological and cognitive changes, genital maturity and the acquisition of productive skills. Vocational interest of a general nature apparently stabilizes by middle adolescence and this factor seems to play a more central role in identity formation in males.

Social-cultural demands of our present society cause changes and self-consciousness between members of the opposite sex. Boys and girls do not view each other straightforwardly; girls become coy, boys take on aggressive behavior, et cetera. Another result supporting the approximate developmental equivalence of boys and girls to age 10 comes

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They studied gazing behavior during dyadic interactions in conversation and construction tasks of four age groups—children from 4-6, 7-9, 10-12, adolescents and adults. They found no differences in gazing between the sexes until the 10-12 age group when there was a slight decrease in time spent gazing during conversation; the difference in gazing time increased significantly at upper age levels. No differences in gazing were found when these age groups were employed in construction-type tasks.

The occupational choices of fifth grade boys and girls were studied by Iglitzen who compared the girls' stated career goals and their acceptance of the "reality" of a typical day of a full-time housewife. One hundred forty-nine girls responded to a questionnaire which examined sex-typed career and employment patterns. The girls indicated a variety of careers, but saw themselves doing traditional "women's work" when asked to write an essay describing a "typical day." Boys examined similarly tended to focus more exclusively on job and career.

Discussing slightly older children, Patterson explained why vocational counseling has had little impact on the career plans of most girls to date:

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"The adolescent girl is often a reluctant client who is involved in identity issues; she may find poor reinforcement in the school guidance office and conflict at home." 9

**Self-Concept Studies**

Broverman et al. found that sex-role stereotypes play a major role in shaping a person's self-concept. 10 A higher social value has repeatedly been ascribed to masculine than feminine behaviors. Studies of older women by Chesler and Bart described the disproportionate amount of psychosomatic complaints, psychiatric hospitalizations and pervasive depression among women who have internalized societal expectations with consequent low self regard and consistent feelings of distress. 11, 12 Persons with low self-esteem have higher levels of anxiety.

In Reed's study, the Piers-Harris self-concept scale was administered in group sessions to students in grades three to six from various inner-city and middle-class

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schools.\textsuperscript{13,14} It was found that lower-class girls had significantly lower self-concept scores than boys, and that middle class girls and boys did not differ significantly in reported self-concept. In both samples boys tended to view themselves as being less anxious than girls, and girls reported they were better behaved than boys. Similarity in self-concept for boys and girls during childhood was also reported by Coopersmith, Maccoby and Jacklin, and Sears.\textsuperscript{15,16,17}

Coopersmith, in his studies with 85 fifth grade boys, asserted that self-esteem is significantly associated with personal satisfaction and effective functioning.\textsuperscript{18} A person with low self-esteem is less capable of resisting pressures to conform and is less able to perceive threatening stimuli. After clinical and experimental studies of the children with the Coopersmith Self-Esteem Inventory (see Appendix E, p. 159), an in-depth interview was conducted with 82 of the

\begin{itemize}
\item \textsuperscript{13} C. L. Reed, "Sex Differences in Elementary School Children's Ideal and Actual Self-Concept," Dissertation Abstracts International, 1973.
\item \textsuperscript{14} Ellen Piers and Dale Harris, The Piers-Harris Children's Self-Concept Scale (Tennessee: Counselor Recordings and Tests, 1969).
\item \textsuperscript{15} S. Coopersmith, The Antecedents of Self-Esteem (San Francisco: W. H. Freeman and Co., 1967).
\item \textsuperscript{16} Maccoby and Jacklin, The Psychology of Sex Differences.
\item \textsuperscript{17} R. R. Sears, "Relation of Early Socialization Experiences and Gender Role in Middle Childhood," Child Development, 1963, pp. 267-289.
\item \textsuperscript{18} Coopersmith, The Antecedents of Self Esteem.
\end{itemize}
mothers. Coopersmith found that mothers of children with high self-esteem play a more active role in decision making and have more authority over the children. Mothers of children with low self-esteem have been least likely to tell their children what to do. Consequently, children of low self-esteem mothers believe it is unlikely that their mothers, who spend entire days in home and child care, will be a frequent source of guidance and discipline. In follow-up after a three week period and then with another group after five years, it was found that a person with high self-esteem maintains a fairly constant image of his capabilities and distinctness as a person.

Both Coopersmith and Sears in their studies of self-esteem with elementary school children learned that school competence and parental warmth and acceptance are significant determinants of the child's self-esteem.\textsuperscript{19,20} It makes little difference, however, for either boys or girls, whether this parental quality is exhibited by the mother or father or both, although the same sexed parent has somewhat more reinforcing power. As indicated in Chapter I of this paper, the sexes do differ in areas most often associated with reinforced socialization, with girls rating higher in self-concept components subsumed under social competence and boys

\textsuperscript{19}Ibid., p. 5.

\textsuperscript{20}Sears, "Relation of Early Socialization Experience and Gender Role in Middle Childhood."
scoring higher in "characteristic" traits of strength, power and dominance. Present data of the above named authors suggest that a child's self-concept is fairly well established by age nine and related to aspects in the family constellation which existed when she/he was age five and to academic competence. Coopersmith supports the contention that self-esteem may vary across different areas of experience according to age, sex, academic or athletic ability and other variables. The Sears Self-Concept Inventory was developed from Sears' research for use with fifth and sixth grade children. It was validated on groups of 84 girls and 75 boys. The three scales of the Inventory contribute to the self-esteem dimension with respect to Self-Criticism, Femininity, and Ideas of Reference. According to Sears, there is no reason to consider any one scale a more accurate measure of good self-concept that any other; however, high scores in the Femininity component consistently related to negative self-evaluation, based on a composite of the three scales, in both sexes. Femininity is further associated with aggression anxiety, high self-aggression, high pro-social and low anti-social aggression. The Sears Inventory appeared to be a good instrument (reliability coefficients for the Self-Criticism, Ideas of Reference and Femininity scales were .84, .76 and .84 respectively) and was used as a primary tool in the present study.

21 Ibid.
Another sub-area of research relevant to the present study concerns sex-role stereotypy among elementary school students. Lennart Wiechel in Malmo, Sweden identified stereotypic sex-role perception as a barrier to cooperation.\textsuperscript{22} This concept was evaluated by a new instrument, developed by Wiechel, for use with children in the intermediate grades. Wiechel had observed that a sex-role barrier existed between girls and boys and was expressed in various ways such as avoidance in choosing classmates of the opposite sex in group activities and maintaining stereotypic ideas in terms of "acceptable" male or female tasks and occupations. Wiechel also designed his test to evaluate "readiness" to cooperate between the sexes and general openness or flexibility in accepting androgynous roles. All told, the instrument has a number of subtests: Sociometric Analysis, Recorded Role Conflicts, Figure Patterns to Color, Cooperating, Cooperating Roles (Pictorial), Attitude Formulation, and Questionnaire on Group Cooperation.

The above-mentioned subtests used several "influencing techniques;" one was a discussion-information model based on texts and pictures describing various sex-role activities. Another concentrated on different role-playing techniques, with a sequence of exercises in cooperation and analysis of

different role conflicts. All techniques were intended to lead to more adequate role perception and cooperation between boys and girls. Children in grades four and six were chosen from Kristianstad school district; these grade levels are equivalent to grades five and seven in American schools. Wiechel selected both boys and girls for his study and classes had only female teachers; a random distribution of teachers was rejected. The program ran for three weeks, after which the children were tested with the Wiechel Sex-Role Perception instrument. One of the specific problems investigated in this study was the extent to which given teaching programs produce an observable effect on readiness to cooperate and change in sex-role perception.

Wiechel reported that the groups exposed to influence had undergone a change toward a greater degree of readiness to cooperate and an increased tendency to reject stereotyped traditional roles. He felt that children would benefit from this program integrated in their daily school work.

A limitation of Wiechel's test appears to be in its omission of developmental stages and their influence on sex-role identity. A person's sex-role identity is not completely due to environmental-cultural influences, but also intrinsic to bio-psychological development.

In the area of cognitive development, we find a theory proposed by Kohlberg who, stimulated by the cognitive stages of Piaget, placed new stress on motives such as curiosity,
mastery, exploration, competence, and effectiveness. Kohlberg pointed out that the child's growing understanding of sexual identity, coupled with growing understanding of cultural sex roles, determine the child's behavioral choices.

In their semilongitudinal study of sex-role attitudes of bright and average boys and girls, Kohlberg and Zigler indicated significant IQ effects in performance on seven tests of sex-role attitudes (experimental-behavioral, verbal, projective doll play). The study also found that while there were marked and similar developmental trends for both bright and average children, trends were largely determined by mental age, with development being about two years advanced for bright children. For example, bright boys would shift from a preference for adult females to a preference for adult males on experimental and doll play tests at about age four, whereas average boys would make the shift at about age six. Kohlberg also defined six stages of moral judgment development which are hierarchical integrations. An example of this would be the use of reciprocity as a moral reason (recognition that "I am my brother's brother") which appears at ages six to seven in every culture, social class, sex group and

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in every subculture studied (Switzerland, United States, Belgium, China, Maylayesian, aboriginal, Mexico, Israel, Hopi, Zuni, Sioux, Papago). According to Kohlberg, a child's basic sex-role identity is largely the result of self-categorization as a male or female made early in development. While dependent on special labeling, categorization is more likely a cognitive reality judgment and secondly related to social rewards, parental identification or sexual fantasies. The tendency to establish positive values and imitate same-sex persons is also developmental according to this theory. The child's cognitive ability--active selection, perceptual organization, knowledge and understanding play an important part in sex-role acquisition.

**Group Process**

Group process describes the interaction of two or more people working together toward a common goal. The activities and interaction of participants are dynamic, helping to psychologically move members in the direction of the shared purpose. Goals for school guidance groups, for example, might be the study of occupations and occupational requirements or getting assistance in making educational/vocational plans.

The group has economic appeal since one leader is able to have contact with more than one individual at a time. It has psychological appeal in the dynamic qualities arising from personal interactions. One such quality is self-
Finally, the intensity of group interaction can be a more powerful learning force than the ordinary classroom environment.

The philosophy integral to learning in a dynamic group guidance setting was an underlying factor in developing groups for this study. Wiechel and Gerson, in studies to be reviewed, employed group methods in the school environment.

School Awareness Groups

Schools perpetuate the sex-role stereotyping that is initiated in the home. Textbooks have traditionally reinforced ideas that males are more important, more active and more successful in dealing with problems, whereas females play a subordinate, home-related role. In order to diminish this influence, guidance groups with the goal of consciousness-raising (C-R) could be organized for different populations within the school and community to heighten awareness.

25 Shertzer and Stone, Fundamentals of Counseling, pp. 441-442; 446-448.


Gerson described the rationale and method of C-R with fifth grade girls in a public school setting. The groups of six met weekly throughout the school year to explore ways of changing sex roles and behavior. Gerson described the nature of a C-R group as between that of the classroom guidance and counseling group, with some elements common to all. Awareness groups for girls must be age-appropriate, as contrasted with C-R groups for adults. Content must deal with feelings and concerns with which this age group can identify, such as growing up within a family. Children cannot adopt life-styles and behaviors that significant adults do not demonstrate.

Another characteristic of the girls' group was the need for a group leader who began and structured the group. Similar to the guidance group, members felt free to challenge the leader while structural limitations necessary for the group's survival (in this case, exclusion of boys) were preserved. In discussions of future goals, the girls all indicated their desire to be both mother and career woman, although the career choices were traditional—secretary, teacher, stewardess. Gerson related that "even when they understood different ways of behaving, their expressed career choices did not change." Gerson contended that the C-R group experience is "an appropriate medium for helping essentially healthy girls cope with a changing society."

Roberts and Roberts suggest Values Voting as a simple, effective technique for looking at roles and introducing issues in a group. Answers to questions being read aloud by the teacher or group leader are voted on as follows: (a) those who agree, raise hands; (2) those who disagree, thumbs down; (c) those who are undecided, fold arms; (d) those who want to pass, no action at all. The leader must make it known that it is all right to pass. Choices to questions are based on values. When ten or more questions are completed, members start to explain why they voted the way they did. Values Voting was a technique used in the career awareness groups of the present study (see Appendix F, p. 163, for the list of questions).

In a very recent study headed by Marcia Guttentag, a research team set up a program to combat sexism at three grade levels. They developed a six-week curriculum and worked with kindergarten, fifth and ninth grade children in three ethnically diverse school districts. The new curriculum concentrated on work, family and personality stereotypes and aimed to make the children more flexible in their assumptions about the sexes. The children learned that occupational and recreational activities could be interchangeable

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between the sexes. Results showed boys become more ambivalent after the six week program and many remained very traditional in their views of working mothers; girls, however, were very responsive to the intervention program. Guttentag concluded that lessons about liberation are not enough to change attitudes and behavior. Children still observe that men have more power and a greater variety of jobs and that mom is the main person who takes care of them. She summed up with the statement, "to change observations, one would need to change reality."

Maternal Employment

The entire topic of changing family life styles and their effect upon modifying the stereotypic perceptions of both sexes needs further exploration. Bee pointed out that early studies about children of employed mothers reflected work with institutionalized children; these children were "stimulus deprived" as well as "mother deprived."32 It is now recognized that children living in group care institutions suffered from a great many things besides a lack of a single mother figure. They also had little contact with father figures, toys and other children and probably also endured a lack of stability during the first months of life. Present studies indicate that interaction and personal

stimulation between mother and child need not suffer as a result of maternal employment.33,34,35

Research is not conclusive concerning maternal involvement in outside employment and its effect on male children. In studies with lower class boys of working mothers, the boys were found to have increased anxieties, increased father-son difficulties and sexual identification conflicts.36 Unresolved difficulties between the parents in the areas of dominance and dependency would tend to provide a confused role model for many boys.

Girls appear to benefit in some way from maternal employment, which may encourage them in a broader range of


38 Bee, Social Issues in Developmental Psychology, p. 132.
interests and activities, according to Poznanski. Intra-
family difficulties suggest that girls, too, have sex-role
problems. While 98% of the girls studied identified with
their mothers as nurturant, only a portion of these girls
identified with the working role of the mother. Further, with
increasing age (8-11), there was a decrease in acceptance of
mother's employment, possibly based on internalized social
norms and personal need for approval. However, across a var-

The effect of employed mothers on their children has
generated much interest. Research findings suggest that a
different role is carried out by the working mother than the
non-working mother and that the very fact of employment was
important to daughters' attitudes and self-concept. Otherwise said, although multiple factors, e.g., maternal job sta-
tus, satisfaction, father's attitude, rural/urban setting, and
child care arrangements, add to the complexity of the effects
of maternal employment on children's attitudes, employment as

39 E. Poznanski, A. Maxey, and A. Marsden, "Clinical Im-
lications of Maternal Employment," in H. Bee, Social Issues
in Developmental Psychology (New York: Harper & Row, 1974),
pp. 126-141.

40 L. B. Iglitzen, "A Child's Eye View of Sex Role,"

41 Hoffman and Nye, Working Mothers, p. 129.
a single factor apparently is sufficient to cause daughters to be less stereotypic in regard to traditional femininity. 42

Hartley, Banducci, and Peterson found that "daughters of working mothers view work as something they will want to do when they are mothers."43,44,45 Hoffman and Nye report that in feelings of adequacy of mothering, consistency of role preference is primary in mothers' influence on daughters; the "happy housewife" who sees no conflict with her role will probably directly reinforce her daughter in this matter and vice versa with career mothers.46 Lowest scores on adequacy of mothering were obtained by the dissatisfied homemaker and highest for the satisfied homemaker.

Fewer stereotypic perceptions were found by Vogel, Broverman, Rosencrantz et al.47 among women college students whose mothers were employed outside the home; comparable, but

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42 Ibid., p. 131.
less consistent results were found among college men, but differences which did occur were in the predicted direction. The authors surveyed 120 college students selected from a pool of 154 subjects used in an earlier study. The subjects were asked to give their mother's current occupation or if the mother was currently unemployed, when and what job she had previously held. Information about the length of employment was not available. Subjects who could not be clearly classified into homemaker or employed mother groups were eliminated from the study. Sex role perceptions of the subjects were assessed by means of a Stereotypic Questionnaire developed by Rosencrantz et al. In this study sex role perceptions are affected by actual sex-role behaviors to which children are exposed. College students of both sexes, whose parents have been employed, perceive significantly smaller differences between masculine and feminine sex-roles than those whose mothers have remained at home unemployed.

In Katz's investigation of role conflict situations, more specifically homemaking-career conflicts, she supports the interpretation that sex-role training has an effect on the method of coping with family-career conflicts. Responses were elicited to a questionnaire from 121 married women and rated on thirteen hypothetical role conflict situations. Women who were brought up in a non-traditional manner were able

to use more efficient methods of resolving conflicts. The traditional model hinders women from performing two roles simultaneously at maximum efficiency. The non-traditional women did not feel they had to conform as strongly to the belief that women are solely responsible for homemaking. They were able to delegate some of the responsibility to others (family or hired help) or they decided that certain tasks did not need to be done as frequently. Alpert and Richardson investigated perceptions of conflict associated with roles through a variation of the Thematic Apperception Test. It was reported that women who share an educational background and education as a professional field of interest, perceived more conflict in their roles with men than with worker or mother.

Fear of Success and Anxiety

The entire topic relating to fear of success in its relation to women has become controversial. This has occurred because of the definition and method of the original Matina Horner experiment. Horner studied 90 females and 88 males who were asked to respond to verbal cues on an adaptation of the Thematic Apperception Test. An example of a cue was:

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"After the first term finals Anne (John) finds herself (himself) at the top of her (his) medical school class." Females responded to the Anne cues and males responded to the John cues. Fear of success as interpreted by Horner's "motive to avoid success" was scored as present if responses contained (1) negative consequences of success, (2) direct expression of conflict about success, (3) activities away from future success, (4) denial of effort or responsibility for attaining success, and (5) bizarre or inappropriate responses. The results showed 65.5% of the female subjects wrote fear of success (FOS) stories, but only 9.1% of the male subjects wrote fear of success (FOS) stories. Female stories were characterized by social rejection, concern with one's normality and femininity and denial or bizarre responses.

Horner hypothesized that females are hampered by a form of anxiety which she called FOS that is uncommon in males, and that personal qualities such as assertiveness, intelligence, and leadership attributable to successful achievers/competitors in our society are incompatible with personal qualities attributed to women. Horner's early study had design weaknesses, one of which was to give the masculine stimulus cue only to males and the feminine stimulus cue only to females. Further, she did not identify the subtle variations between males and females at different age, educational and socioeconomic groups. In view of the weaknesses, reviewed by Tresemer, Horner and colleagues developed a better one in
which the research was reassessed and broadened.\textsuperscript{51,52}

At present there is increasing agreement that there is a motive to avoid success in samples of both male and female college students with high FOS found among honor students of both sexes.\textsuperscript{53,54,55} Other articles which deal with the FOS syndrome are numerous; several pertinent viewpoints will follow.

One such study by Monahan, Kuhn and Shaver replicated the Horner research with 120 10-16 year old boys and girls in a completely crossed design.\textsuperscript{56} Both sexes gave more negative responses to the female cue, indicating that sex-role stereotypes are largely responsible for FOS imagery. There was also some indication that motivational differences were being tapped and that motive to avoid success is most actively aroused

\begin{itemize}
\item \textsuperscript{52} D. Tresemmer, M. Horner, A. Berens, and R. Watson, "Scoring Manual for an Empirically-Derived Scoring System for Motive to Avoid Success." Unpublished manuscript, Harvard University, 1973.
\item \textsuperscript{54} Hoffman and Nye, \textit{Working Mothers}, p. 134.
\item \textsuperscript{55} D. Tinsley and J. Moreland, "Achievement Motivation Constructs and Career Aspirations." Unpublished manuscript, Southern Illinois University. Presented at the APA Convention, Chicago, 1975.
\item \textsuperscript{56} L. Monahan, M. Kuhn, and P. Shaver, "Intrapsychic vs. Cultural Explanations of the 'Fear of Success' Motive," \textit{Journal of Personality and Social Psychology}, 1974, Vol. 29, pp. 60-64.
\end{itemize}
in competitive situations. Still another factor to be considered is related to patterns established before a girl reaches high school and whether she attends coed or non-coed schools during pre-adolescence.\(^{57}\) It seems that when females have not learned to avoid success in the presence of male classmates in elementary school (non-coed situations), success is not feared. It was also observed that greater FOS was manifest in older college females due to the increasingly significant competition for valued positions in academic and professional life.

Levine and Crumrine found that they could not accept the "tentative findings" of the Horner study and suggested that the media may have played an important role in helping women accept their strengths and consequent successes.\(^{58}\) In an unpublished paper, Major and Sherman related 40 female undergraduate's FOS to perceived physical attractiveness.\(^ {59}\) The subjects were selected on a new FOS scale from 73 original subjects and were ranked LOW ATT-LOW FOS, LOW ATT-HIGH FOS, HIGH ATT-LOW FOS, and HIGH ATT-HIGH FOS. In this experiment


two male and two female confederates independently rated each
subject present in terms of physical attractiveness on a 1-9
scale, where 1 indicated extremely unattractive and 9 ex­
tremely attractive. All subjects competed on anagram tests
against videotaped performances of all four competitors and
also participated in a competitor control condition. The main
effect for ATT was significant. LOW ATT women performed sig­
nificantly better than did HIGH ATT women. HIGH ATT-HIGH FOS
subjects performed worst in competitive tasks with males,
while LOW ATT-HIGH FOS subjects performed their worst against
females and LOW ATT women performed significantly better than
did the HIGH ATT women in both competitive and non-competitive
situations.

Larwood, in her work with 96 male and female university
students, also gives unqualified support to Horner's sugges­
tion that lack of success by women in an achievement-oriented
situation is mediated by sex-role.60,61 The task simulated
certain industrial production activities. Challenge subjects,
in dropping marble from a 30 cm. height into a small hole in a
wooden box, saw a poster indicating that the opposite sex had
done better than their own. For no-challenge subjects, the
sex designations on the poster were reversed. Another

60 Laurie Larwood, "Sex Role as a Mediator of Achievement
manuscript presented at the APA Convention, Chicago, 1975,
pp. 1-12.

61 Horner, "Toward an Understanding of Achievement-
Related Conflicts in Women."
variable was the "experimenter present" or "experimenter absent" factor when the task was performed. Male challenge subjects with a female experimenter present performed best, while the performance of (challenged and unchallenged) females was markedly lower for both conditions. The task was mechanical and performance differences favoring males over females had been expected. However, workers did not necessarily perform best with a male supervisor and it was felt that "supervision by members of both sexes might be examined in industrial situations--even on a "masculine type task." The motive to avoid success by women presumably springs from acquisition by females of the social value that success is inappropriate for themselves, if femininity, as defined in our culture, is valued.

In a recent review analyzing Horner's research, Zuckerman and Wheeler remind again that the data are ambiguous and inconsistent as originally defined.62 Although Zuckerman and Wheeler cite extensive research which would seemingly contradict the earlier work, they also affirm (1) that both males and females wrote more FOS stories to the Anne cue than to the John cue; (2) that Makosky's investigation found high FOS females performed best when competing against another female and high FOS females performed better on a "feminine" rather than on a "masculine" task; (3) that the equation between

success and masculinity and success and femininity are socially determined; (4) that many of the difficulties in accepting Horner's study are statistical and semantic; and (5) that there is a possibility the women's liberation movement has effected attitudes and performance of both males and females in recent years.

The controversy generated by the generous number of investigations related to FOS implies an area of importance in understanding differences in functioning between the sexes when faced with a cognitive task. Even if this were eliminated today, it would still be noteworthy to make comparisons with previously stereotypic behavior; however, this is not yet the case. Although the topic is complex, it is not conclusively negative. In the opinion of this writer, the subject area involving FOS is worthy of consideration, and if present at all, of importance in relation to the present study and other research regarding societal sex-roles precisely because (1) both males and females wrote more FOS stories to the Anne cue than to the John cue; (2) cultural shaping and reinforcement may be involved in a higher proportion (but not all) of FOS/competitive responses for both sexes; (3) the Horner study does reflect differences in social expectations between the sexes; and (4) if the women's "educational" movement has been responsible for modification in FOS within the past few years, the possibility of further sex-role adaptations in the direction of androgynous tasks is optimistic. Researchers should expend considerable effort
to observe and record these changes.

Since there have been many problems related to FOS and a dearth of literature associated with sex-role development in elementary school children, there appears a need for more carefully designed, empirical studies within the age range of children and adolescents, between 6-18. More information is needed in regard to developmental stages of age, grade and intellectual growth, social appropriateness of sex-role related behavior, relationship to self-concept, parental, school and peer influence concerning the "intermediate age" child.

Summary

The foregoing research has been reviewed and aspects have been adapted to formulate the present study. Consciousness-raising or awareness groups were developed in public school districts with fifth grade female students. The concept of career awareness workshops is closely related to Gerson's consciousness raising groups with fifth grade girls. During an eight week program, the children were exposed to stories, role playing, values voting, and special projects (see Appendix F, p. 163). This program was organized following the suggestions of Roberts and Roberts and L. Wiechel in their studies of group work. In the present research, the findings of Iglitzen, Asher, Gottman, Markell, and Kohlberg have received primary consideration. Women group leaders were selected following results of Lee and Wolinsky. Studies of Horner, Guttentag and others cited earlier were influential
in developing the philosophy pertinent to the experiment.

The Wiechel and Sears instruments reviewed in the present chapter were appropriate for measuring the attitude and personality changes hypothesized earlier, and were incorporated into the study. A more detailed description of their use will be discussed under Method in Chapter III, with results of the experiment in Chapter IV.
CHAPTER III

METHODS AND PROCEDURE

A review of the research relevant to the present study was presented in Chapter II. This chapter will describe the setting, population, instruments, and methods followed in obtaining the data. It will also include statistical procedures for analysis of data.

Introduction

This experiment consisted of two parts. The principal part which will occupy the major portion of this chapter used girls of fifth grade level and was concerned with the value of career awareness workshops in the school setting. The second, a brief study, attempted to determine the validity of one of the important test instruments. That instrument, the Wiechel Sex-Role Perception of Task Test (WS-RT), was originally developed in Sweden, and it was necessary to determine if an adaptation was satisfactory with an American population similar to that used in the original study.

Preexperimental Study

Prior to the major experiment, a brief validation study of test instruments was conducted. Characteristics of validity group students approximated those selected for the major
research in terms of age, sex, grade level, and socioeconomic status.

After administration of the WS-RT, the 23 girls responded to questions concerning content validity of this instrument. The responses to the questions which estimated content validity are found in Appendix D, p. 154. It was ascertained that the format and situations included in the Wiechel Test had sufficiently good content validity for girls in this age range.

A preexperimental administration of the Sears Self-Concept Inventory (SS-CI) was conducted at the same time as the Wiechel Test to determine appropriate norms for local population.

Procedure

The experiment was organized in the following sequence.

Setting

The sample population was obtained by direct contact with suburban middle to upper middle class school districts. Four districts with approximately 171 fifth grade girls who qualified as appropriate population consented to participate.

The possibility of certain factors which might interfere with validity were considered. Therefore, school districts in middle to upper-middle socioeconomic areas were selected to diminish the population diversity and problems of economic disadvantage found in urban schools. Vocabulary
development and exposure to environmental trends did not present a problem among students of participating districts. On a priori grounds the experimenter estimated that fifth grade students from these districts would have sufficient vocabulary and that life experiences were consistent with topics discussed in the experimental group.

The general sequence of work within the school was explained to school administrators and fifth grade teachers in after school meetings conducted at each school. It was agreed that girls in certain classes were to participate in the workshops and that the other classes were to comprise the control group. It was also necessary to send an explanatory letter to parents of subjects, and to obtain their consent to participate in the experiment. (Appendix H, p. 174.)

During the initial phase, teachers and parents were informed that their contribution to the study would be the completion of report forms evaluating each subject. The forms were distributed to parents and teachers during the seventh week of the experiment, with approval for follow-up for unreturned or incomplete forms.

All phases of the study which involved subject participation occurred in the school setting. Group meetings were planned during the regular school day and convened in an unused classroom or library within the subject's own building. Special planning to reserve a two-hour time bloc was required for evaluation of subjects in this setting in the ninth week of the study.
Subjects

The subjects for this study consisted of 171 fifth grade female students enrolled in four north suburban school districts in the Chicago area. Girls within each district were randomly assigned to experimental treatment or the control group. Students were considered comparable at the outset of the study on the basis of school district, sex and grade level.

The 103 girls in the experimental group were divided into nine smaller groups of approximately 11 students each. The final experimental group included 101 girls, since two were dropped from the sample as a result of incomplete records. These smaller career awareness groups met for one hour weekly for eight consecutive weeks, each led by an adult group leader. The 68 girls who were assigned to the control group did not participate in weekly settings. During the ninth week of the study all students were tested in their own schools on two measurements used for this study.

Sample Size

The number of subjects included in the sample was arrived at by examining the hypotheses and the accompanying statistical tests of significance to determine if sufficient power was in evidence. The methodology utilized was
consistent with that as given by Kirk and Winer.\(^1\),\(^2\) In all instances the power to detect meaningful differences among the means was larger than .9 for all statistical tests. Consequently it was concluded that sample size was sufficient for the experimenter's purpose.

Group Leaders

Qualifications for adult group leaders were that they be female, graduate students in a guidance and counseling program, and/or have had some counseling (lay or peer) experience. It was also important that women selected for this task identify positively with issues concerning job equality and independent choices for females.

The leaders were paid. Characteristics of group leaders chosen for this study are shown in Table 1 on the next page.

It was necessary to employ six group leaders for four districts since Leader 3 dropped out after three workshops to take a full-time job. Also, scheduling in one school district made it necessary to conduct two workshops during the same time period; this required two leaders for their experimental group population.


### TABLE 1

**GROUP LEADER CHARACTERISTICS**

<table>
<thead>
<tr>
<th>Group Leader</th>
<th>Age</th>
<th>Residence</th>
<th>Marital Status*</th>
<th>Occupation</th>
<th>Counseling Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>26</td>
<td>Suburban</td>
<td>M</td>
<td>Homemaker--Grad Student</td>
<td>Practicum</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Nurse--Grad Student</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>35</td>
<td>Urban</td>
<td>D</td>
<td>Homemaker--Guidance Counselor (M.Ed.)</td>
<td>School Professional</td>
</tr>
<tr>
<td>3</td>
<td>34</td>
<td>Suburban</td>
<td>M</td>
<td>Homemaker--Return to School--Adult Education</td>
<td>Peer Counselor</td>
</tr>
<tr>
<td>4</td>
<td>51</td>
<td>Suburban</td>
<td>M</td>
<td>Homemaker--Return to School--Adult Education</td>
<td>Peer Counselor</td>
</tr>
<tr>
<td>5</td>
<td>46</td>
<td>Suburban</td>
<td>D</td>
<td>Elementary Fifth Grade Teacher--Grad Student</td>
<td>Practicum--Job Experience</td>
</tr>
<tr>
<td>6</td>
<td>39</td>
<td>Suburban</td>
<td>S</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*M = Married  
D = Divorced  
S = Single
In three two-hour orientation meetings, group leaders were given general information about the study and more specific information concerning their assignment with the girls in "their" district. Developmental expectations for this age group (9-11) were reviewed in regard to intellectual, emotional, physical and social variance.

Orientation also included information and discussion of women's issues. Such topics as women's role in history, present status, life-style, educational-career opportunities and legislative issues were discussed. Present problems such as conformity to cultural expectations and greater flexibility of occupational-role choice were examined in preparation for the weekly meetings with students. A variety of tasks and techniques for working with groups were explained and demonstrated; each leader was expected to use the outlined topics and tasks as a resource and supplement these with individual experiences (see Appendix F, p. 163). Enthusiasm among the group leaders was high. Details of their experiences were described on the weekly record sheets where they listed attendance, activities and comments after each session.

Two follow-up meetings were convened with group leaders at the end of the workshop experience. Group leaders were asked to rate students on degree of participation after each meeting, and these data formed part of the statistical analysis (see Appendix I, p. 178).
Career Awareness Groups

Students in the experimental group met in small discussion groups with a group leader to discuss many topics subsumed under career aspirations for women. Sex-role stereotyping, as it pertained to education, occupation, and general life-style choices of girls and women was explored in the group discussions.

It was planned that groups of approximately 10 fifth grade girls would meet for eight successive weeks with an adult leader, to learn that girls and women can do jobs and participate in activities formerly associated with males.

Students with their leader were seated in discussion circles to enhance feelings of trust and intimacy. Prior to meeting with the girls, selected group leaders met for orientation in order to become familiar with the philosophical approach and the tasks required before meeting with students.

Present attitudes and stereotypes were examined with new information provided by the adult leader. A few girls were knowledgeable of present trends, but most were not. The twenty-five tasks listed in Appendix F, p. 163 were used by leaders as a basis for discussion. In this way content of the meetings was standardized to some extent. Occupations of females were discussed in relation to educational goals, the role of homemaker, and current jobs open to women. Some historical background as well as current legislative trends were integrated in this format.
Although high interest topics were stimulating to discussion, leaders were instructed in using techniques which would sustain attention and enhance interest among the girls. Methods such as Values Voting, collection of current advertising, interviews and role playing were indicated as successful by leaders during the eight week period.

Organization

During the eight week period in which fifth grade subjects met with group leaders, several other phases of the study were being accomplished: (1) the author met with adult leaders for continued orientation and follow-up, (2) teachers completed report forms for female students, and (3) parents of subjects completed informational reports.

Tests were administered to fifth grade girls in both the experimental and control groups as the final phase of the study. Testing was done during the ninth week, after termination of the career-awareness discussion groups. Testing was accomplished with one or two classroom groups at a time during the school day; however, experimental and control groups of subjects were not mixed. Time allowed for testing was two hours, but actually involved less time in all cases. The author, who acted as examiner, and an assistant, both unknown to the subjects, administered all tests.
Tests and Evaluation Instruments

The Wiechel Sex-Role Perception of Task Test (WS-RT)

One instrument used to test fifth grade girls in the experimental and control groups was an adaptation of the Wiechel Sex-Role Perception of Task Test (see Appendix A, p. 123). It was developed by Lennart Wiechel in Malmo, Sweden, and purports to test "a program of influence" on children in the intermediate grades. Reliability, in Wiechel's study, had been statistically established with a sample group of 240 students.

Because the WS-RT had been developed in Sweden, it was necessary to translate it to English and adapt it for the American milieu. It seemed appropriate also to estimate the content validity of the instrument with American students as distinguished from Swedish students. As had been discussed, a preliminary experiment was performed using a group of girls comparable to those participating in the experiment. These data are continued in Appendix D, p. 154.

Wiechel's research indicated that groups exposed to the program underwent a change toward a greater degree of readiness to cooperate in school activities with the opposite sex and an increased tendency to reject stereotyped roles. The experimental plan chosen for this study is an adaptation of Wiechel's. In addition to the difference in national population, changes for the present study were (1) a sample group consisting entirely of female students, (2) a time schedule of eight hours of group activity (over an eight week period),
and (3) elimination of the subtest designed to include male students. Several items were added to subtests—Recorded Role playing and Cooperation—to increase reliability.

This first American adaptation of the Wiechel technique and test were used to measure degree of influence on sex-role perception among students who had participated in career awareness discussion groups as contrasted with students who did not. Subtests included for examination were: (1) Socio­metric Analysis, (2) Recorded Role-Playing, (3) Role Cooperation—Pictorial, (4) Attitude Formation, and (5) Cooperation. The test employed a variety of teaching techniques using pictures, recorded role playing on cassette tape, class lists for the sociometric items, and checklists for the attitude items. The wide variety of techniques made administration of the test complex, but at the same time, added to the high level of interest among most students. The sociometric subtest used class lists and had two sub-scales, Socio A and Socio B which should have been pooled. Since the statistical analysis kept them separate, two different analyses were given.

Each subtest was distinct and scored differently, the object throughout being the measurement of acceptance of androgynous activities and cooperation between the sexes on designated tasks. Points were given for "correct" answers according to this test, with high scores reflecting persons who are less stereotypic in sex-role choices (see Appendix B, p. 139, for scoring).
In summary, the Wiechel measurement attempted to assess the extent that given teaching programs produce an observable effect on sex-role perceptions of tasks, activities, and occupations, causing sufficient change to diminish stereotypic attitudes.

The Sears Self-Concept Inventory (SS-CI)

The Sears Self-Concept Inventory was chosen for this study because of its relationship to a masculinity-femininity instrument during its development by Robert Sears in 1958. Nine questions in the Inventory ask about vocational choice. Subjects used for the original research of this instrument were nearly 300 intermediate grade North American children; the final form was designed for use with fifth and sixth grade children. The 76 questions to be answered by circling "yes" or "no" were divided into three scales which alternated throughout the test. Personality components being assessed by these scales were Self-Criticism (S-C), Ideas of Reference (I-R), and Femininity (Fe). The test tapped different aspects of the positive and negative qualities of self-evaluation; high scores on any of the three subscales comprised the total scores on the test, with low scores indicative of positive attitudes of self-esteem. According to Sears, two important factors which contribute to the formation of self-concept were parental warmth and school competence.

Sears' early investigations (1951-1952) upon which the 1958 standardization was based showed mean (composite) scores
of 29 (Fe between 13 and 14, S-C 7, I-R 7½). Mean for composite scores for the present population was approximately 36.

Apparently the girls studied by Sears had somewhat higher degrees of self-esteem, although his explanatory data suggests that scores vary slightly from one scale to another "because of children's errors in marking the questionnaire sheets." In the investigator's opinion, composite scores between 15 and 30 on the Sears Self-Concept Inventory indicate a healthy self-concept and that scores of 50 or higher indicate too low a degree of self-esteem. By this estimate, raw scores of 15 or less would be less favorable, or within the range of egocentricity.

According to Sears, femininity in both sexes is associated not only with low self-esteem, but with aggression anxiety and other forms of aggressive feelings commonly considered the products of fear-induced inhibition. Analysis of items under self-criticism and ideas of reference reflect a tendency toward suspiciousness or sensitivity to external events if answered positively. A great many answers corresponding to these three traits gives one a high score and diminished self-concept (see Appendix C, p. 148, for scoring). Test items relate to school competency, job expectations, recreational and personal preferences.

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3 R. Sears, Personal communication.

Research findings for the Sears are congruent with those of Coopersmith in the areas of parental warmth and acceptance. Experimental studies also indicated that a person with low self-esteem is less capable of resisting pressures to conform and, thus, would be a significant factor among the choices made by the girls of the present study.5

Teacher Reports

Fifth grade teachers in the participating schools were requested to evaluate their students' achievement and adjustment. They were informed of this phase at the planning meeting prior to the study and their participation was approved by the school administrators. Ratings were for both experimental and control group students.

Rating evaluation forms are found in Appendix G, p. 171. Teachers were asked to assess students' achievement and adjustment as perceived in the regular classroom situation at the time the experiment was terminated. The items on the form were classified in terms of activity, achievement and adjustment. Each factor was evaluated on a nine point scale for each child and formed the basis of the later statistical analysis.

Parents of fifth grade girls in both experimental and control groups were also asked to complete reports. This phase had administrative approval in participating schools. Parents were told of their contribution in the introductory letter. The form was sent home with a cover letter during the seventh week of the study. The consent letter and Parent Report form will be found in Appendix H, p. 174.

Two kinds of information were extracted from the parents' reports. One was the status of the mother's current employment, and the other was parents' perception of their daughter's adjustment and achievement. The latter was rated on a six point combined scale. The only information obtained from these report forms with regard to maternal employment was mothers' current employment status, grossly defined as being either employed or unemployed.

Preliminary planning with school districts allowed for follow-up of unreturned or incomplete Parent Report Forms by the investigator. In actuality, the schools permitted follow-up on a limited basis; parents were contacted once, by the principal, during the post-test period.

Eighty-seven percent of the Parent Report Forms were returned, and in all but two cases, basic information concerning maternal employment was obtained from school records. According to combined data from Parental Reports and school records, 44% of the subjects' mothers were employed, carrying an implication of differentiation from those families (56%) where
mothers were unemployed. Although detailed information about maternal employment was insufficient for analysis, research indicated that the simple status of maternal employment might show significance.

**Group Leader Report Sheets**

Weekly record sheets were completed by leaders during the eight week experimental period. A sample form may be seen in Appendix I, p.178. It includes problems, observations, successful meetings, and techniques. At the end of the workshops, the investigator analyzed the weekly group leaders' reports and recorded the amount of interest and activity of each child. Participation was evaluated on a three point scale ranging from Much to Little.

**Analysis of Data**

The Wiechel and Sears Tests were hand scored and raw score data were transferred to keypunched IBM cards. Evaluations from the Group Leaders' Weekly Record Sheets, Parent and Teacher Report Forms were given ratings and these too were keypunched on IBM cards. The Statistical Package for Social Sciences (SPSS) followed by a MANOVA and correlational operations were used to determine means, standard deviations, correlations and multivariate analyses for pooled districts and the four separate districts.

Scores from the twelve dependent variables and evaluation ratings were subjected to a number of analyses. The twelve variables were subtests Sociometric A, Sociometric B,
Recorded Role Playing, Role Cooperation--Pictorial, Different Things to Do, Describing Words, Cooperation (all of the preceding from the Wiechel Scale), the Wiechel composite score; Self-Criticism, Femininity, Ideas of Reference (from the Sears Inventory), and the Sears composite.

The data were subjected to the following analyses:

1. Global analysis of means by the Wilks Lambda Criterion. Here the dependent variables were considered to be multivariate profiles in separate contrasts of experimental vs. control group, maternal employment vs. non-employment, and the group by employment interaction.

2. Numerous 2x2 analyses of variance (group vs. maternal employment) in which the twelve dependent variables were the data entries.

3. Mean value comparisons of the variables using the t-statistic.

4. Analysis of the leaders' ratings, parental data, and teacher data vs. the student dependent variables by means of correlation coefficients.

Summary

Chapter III has included a description of the setting, test instruments, subjects, and data analysis of this research. Chapter IV will review results of the data analysis and discussion of these findings.
CHAPTER IV

RESULTS AND DISCUSSION

The present experiment proceeded on the assumption that fifth grade girls on the average have stereotypic attitudes concerning traditional sex-roles. A major experimental purpose was to measure these attitudes and determine whether they can be modified by counseling-like school environment workshops. Other purposes were to determine if career awareness workshops had an effect on self-concept, and if stereotypy and self-concept are related to maternal employment.

The instrument used to measure stereotypic attitudes was the Wiechel Sex-Role Perception of Task Test (WS-RT) and the instrument measuring self-concept was the Sears Self-Concept Inventory (SS-CI). As described in Chapter III, the subjects were fifth grade girls enrolled in suburban public schools. The tests were administered to 101 experimental group students after eight weeks' participation in career awareness workshops and to 68 controls.

While the relationship between sex-role and self-esteem has been questionable, 44% of the SS-CI questions comprised the femininity Index of the Sears and justified inclusion of the self-concept variable in the experiment. Since the typical feminine personality as defined by Broverman et al. has
been considered too passive and dependent for good mental health, it was hypothesized that a lower Femininity score on the Sears would be associated with less stereotypy and more positive self-identity.\(^1\) Furthermore, it was of interest to determine if group participation in a workshop stressing change in sex-role stereotypy has a "side effect" in improving self-concept.

The following hypotheses were tested: (1) students in the career awareness workshops display significantly less sex-role stereotypy than students in the control group, (2) self-concept is significantly inversely related to sex-role stereotypy, (3) participation in career awareness groups significantly increase self-concept, (4) students whose mothers are employed display significantly less sex-role stereotypy than students whose mothers are not employed, and (5) the interactive effects of career awareness workshops and maternal employment are significantly associated with less sex-role stereotypy.

The major variables relevant to the study were: (1) participation (or not) of fifth grade girls in career awareness discussion groups, (2) status of maternal employment, (3) scores on the Wiechel Sex-Role Perception of Task Test, and (4) scores on the Sears Self-Concept Inventory. Statistical analyses were based on data obtained from the

experimental and control groups, and on individual districts, as well as data pooled across districts. Additional sources of information were contributed by parents, teachers, and group leaders.

A multivariate analysis of variance was used to determine whether participation in groups or maternal employment affected subtest and composite scores of the Wiechel and Sears instruments. Subtests included in the Wiechel were: Sociometric A and B, Recorded Role Playing, Role Cooperation --Pictorial, Different Things to Do, Describing Words, and Cooperation. The Sears subtests were called Self-Criticism, Femininity, and Ideas of Reference. All were described in Chapter III.

Raw data were collected and are displayed in the forms of means and standard deviations. The principal statistical analysis tools were univariate and multivariate analyses of variance. Multivariate analyses were performed to test Hypotheses I, III and IVa; results, as relevant, will be discussed in this chapter. A statement of each hypothesis follows with the relevant analyses and discussion of data. Results of the analyses of the additional observations are discussed after results of the main hypotheses.

The subjects were all fifth grade girls in four school districts. They were divided into experimental and control groups on the basis of whole-classroom availability; an entire class was either in the experimental or control group. The distribution of students in the two groups for each of
the four districts is shown in Table 2, along with the data on the number of girls whose mother was employed.

**TABLE 2**

**SUBJECT CHARACTERISTICS**

<table>
<thead>
<tr>
<th>School District</th>
<th>Number of Students</th>
<th>Frequency of Mother Employed</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Group</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experimental</td>
<td>31</td>
<td>15 (48%)</td>
</tr>
<tr>
<td>Control</td>
<td>15</td>
<td>10 (66%)</td>
</tr>
<tr>
<td>Total</td>
<td>46</td>
<td>25 (54%)</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experimental</td>
<td>24</td>
<td>9 (38%)</td>
</tr>
<tr>
<td>Control</td>
<td>20</td>
<td>5 (25%)</td>
</tr>
<tr>
<td>Total</td>
<td>44</td>
<td>14 (34%)</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experimental</td>
<td>21</td>
<td>6 (29%)</td>
</tr>
<tr>
<td>Control</td>
<td>13</td>
<td>6 (46%)</td>
</tr>
<tr>
<td>Total</td>
<td>34</td>
<td>12 (35%)</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experimental</td>
<td>25</td>
<td>12 (48%)</td>
</tr>
<tr>
<td>Control</td>
<td>20</td>
<td>12 (60%)</td>
</tr>
<tr>
<td>Total</td>
<td>45</td>
<td>24 (53%)</td>
</tr>
<tr>
<td>Pooled</td>
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<td></td>
</tr>
<tr>
<td>Experimental</td>
<td>101</td>
<td>42 (42%)</td>
</tr>
<tr>
<td>Control</td>
<td>68</td>
<td>33 (49%)</td>
</tr>
<tr>
<td>Total</td>
<td>169</td>
<td>75 (44%)</td>
</tr>
</tbody>
</table>
Hypothesis I. Fifth grade girls who have participated in career awareness workshops are significantly less stereotypic in their perception of sex-typed activities than those who have not participated in these discussions.

Primary data relevant to this hypothesis were the Wiechel composite scores, the means and standard deviations of which are shown in Tables 3, 4, 5, 6, and 7. A higher score implies less stereotypy. The data were divided into subtests and composite score; the upper part of the tables (the Wiechel scores) are relevant to the current hypothesis.

As shown in Table 3, which displays data pooled from all districts, the overall mean for the Wiechel for the experimental group composite score, 90.6, as compared to the control group mean, 74.1, falls in the expected direction and was significant \( F = 36.84, p < .001 \). Tables 4, 5, 6, and 7 indicate that the directions of the mean score differences were reasonably consistent and were significant for three of the four districts. It is not known what distinguished the exception, District 3, from the others. Data from the experimental group for the separate districts were not sufficient to test whether such factors as leader personality or random difference between the girls account for the distinction.
The preceding analysis relied on univariate analyses of variance in which intercorrelations of Wiechel subtests for each subject did not enter into the calculations. In an attempt to incorporate intercorrelational data, a second approach to experimental group/control group comparisons was made using a multivariate analysis in which the Wiechel subtest and composite scores may be considered a "profile." In other words, the six Wiechel scores may be considered to be simultaneous for each individual so that the comparison between experimental group girls and control group girls becomes a "whole girl" comparison.

The particular statistic used was the Wilks Lambda Criterion. The results are shown at the bottoms of Tables 3, 4, 5, 6, and 7. Table 3 indicates that the pooled experimental group/control group comparison was significant at the 1% level \((F = 4.91)\). For the individual school districts, only for District 3 was the difference not significant.

It is also of interest to examine the relative contributions of the Wiechel subtests to the composite score. One basis of comparison are the differences between the mean scores on the subtests. In Table 3, it is apparent from significance tests at the 5% level or better, that the most discriminating subtests were the Sociometric B \((p < .05)\), Different Things to Do \((p < .001)\), and Describing Words \((p < .001)\).
<table>
<thead>
<tr>
<th>Variable</th>
<th>Experimental Group</th>
<th>Control Group</th>
<th>MS</th>
<th>Univariate F Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Wiechel Test</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Socio A</td>
<td>.56</td>
<td>.69</td>
<td>.51</td>
<td>.63</td>
</tr>
<tr>
<td>Socio B</td>
<td>.90</td>
<td>1.02</td>
<td>1.23</td>
<td>1.03</td>
</tr>
<tr>
<td>Recorded Role</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Playing</td>
<td>11.49</td>
<td>3.20</td>
<td>9.47</td>
<td>2.92</td>
</tr>
<tr>
<td>Role Cooperation-Pictorial</td>
<td>6.66</td>
<td>3.84</td>
<td>5.42</td>
<td>3.03</td>
</tr>
<tr>
<td>Different Things to Do</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Describing Words</td>
<td>18.53</td>
<td>5.22</td>
<td>14.60</td>
<td>5.07</td>
</tr>
<tr>
<td>Cooperation</td>
<td>36.88</td>
<td>11.31</td>
<td>27.80</td>
<td>11.19</td>
</tr>
<tr>
<td>Composite</td>
<td>90.64</td>
<td>18.11</td>
<td>74.08</td>
<td>16.12</td>
</tr>
<tr>
<td><strong>Sears Test</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-Criticism</td>
<td>7.92</td>
<td>3.63</td>
<td>7.61</td>
<td>3.31</td>
</tr>
<tr>
<td>Femininity</td>
<td>18.54</td>
<td>3.96</td>
<td>19.92</td>
<td>3.73</td>
</tr>
<tr>
<td>Ideas of Reference</td>
<td>9.96</td>
<td>3.72</td>
<td>9.89</td>
<td>3.92</td>
</tr>
<tr>
<td>Composite</td>
<td>36.40</td>
<td>7.99</td>
<td>37.52</td>
<td>8.08</td>
</tr>
</tbody>
</table>

Univariate F tests df = 1,165
Lambda Criterion F Ratio = 4.907; p < .001; df = 1,154

*  p < .05
** p < .01
*** p < .001
### Table 4

**Means, Standard Deviation and P Values on Group Membership for Wiechel and Sears Tests Showing Four Individual School Districts**

<table>
<thead>
<tr>
<th></th>
<th>Experimental Group</th>
<th>Control Group</th>
<th>MS</th>
<th>Univariate F Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Wiechel Test</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Socio A</td>
<td>.45</td>
<td>.66</td>
<td>.47</td>
<td>1.00</td>
</tr>
<tr>
<td>Socio B</td>
<td>.61</td>
<td>1.53</td>
<td>8.56</td>
<td>10.77**</td>
</tr>
<tr>
<td>Recorded Role</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Playing</td>
<td>12.90</td>
<td>11.40</td>
<td>22.84</td>
<td>2.35</td>
</tr>
<tr>
<td>Role Cooperation</td>
<td>7.35</td>
<td>6.66</td>
<td>4.78</td>
<td>&lt;1.00</td>
</tr>
<tr>
<td>Different Things</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>to Do</td>
<td>19.22</td>
<td>15.73</td>
<td>123.30</td>
<td>4.12*</td>
</tr>
<tr>
<td>Describing Words</td>
<td>36.80</td>
<td>30.13</td>
<td>450.14</td>
<td>3.10</td>
</tr>
<tr>
<td>Cooperation</td>
<td>16.93</td>
<td>15.13</td>
<td>32.83</td>
<td>9.11**</td>
</tr>
<tr>
<td>Composite</td>
<td>94.29</td>
<td>81.26</td>
<td>1714.56</td>
<td>5.04*</td>
</tr>
<tr>
<td><strong>Sears Test</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-Criticism</td>
<td>7.90</td>
<td>8.73</td>
<td>7.00</td>
<td>&lt;1.00</td>
</tr>
<tr>
<td>Femininity</td>
<td>18.25</td>
<td>20.33</td>
<td>43.53</td>
<td>2.65</td>
</tr>
<tr>
<td>Ideas of Reference</td>
<td>9.80</td>
<td>9.06</td>
<td>5.53</td>
<td>&lt;1.00</td>
</tr>
<tr>
<td>Composite</td>
<td>36.00</td>
<td>38.13</td>
<td>46.00</td>
<td>&lt;1.00</td>
</tr>
</tbody>
</table>

Univariate F tests df = 1,42
Lambda Criterion F Ratio = 1.957; p < .066; df = 12,21

* p < .05  
** p < .01  
*** p < .001
### Table 5

**Means, Standard Deviation and P Values on Group Membership for Wiechel and Sears Tests Showing Four Individual School Districts**

<table>
<thead>
<tr>
<th>District 2</th>
<th>Variable</th>
<th>Experimental Group</th>
<th>Control Group</th>
<th>MS</th>
<th>Univariate F Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Wiechel Test</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Socio A</td>
<td>.58</td>
<td>.40</td>
<td>.370</td>
<td>&lt; 1.00</td>
</tr>
<tr>
<td></td>
<td>Socio B</td>
<td>.87</td>
<td>1.15</td>
<td>.825</td>
<td>&lt; 1.00</td>
</tr>
<tr>
<td></td>
<td>Recorded Role Playing</td>
<td>10.62</td>
<td>7.50</td>
<td>106.53</td>
<td>21.52***</td>
</tr>
<tr>
<td></td>
<td>Role Cooperation--Pictorial</td>
<td>6.66</td>
<td>5.70</td>
<td>10.20</td>
<td>1.27</td>
</tr>
<tr>
<td></td>
<td>Different Things to Do</td>
<td>17.29</td>
<td>12.15</td>
<td>288.40</td>
<td>12.52***</td>
</tr>
<tr>
<td></td>
<td>Describing Words</td>
<td>37.83</td>
<td>24.75</td>
<td>1867.35</td>
<td>14.83***</td>
</tr>
<tr>
<td></td>
<td>Cooperation</td>
<td>15.20</td>
<td>15.30</td>
<td>.092</td>
<td>&lt; 1.00</td>
</tr>
<tr>
<td></td>
<td>Composite</td>
<td>89.08</td>
<td>66.95</td>
<td>5344.17</td>
<td>18.52***</td>
</tr>
<tr>
<td></td>
<td>Sears Test</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Self-Criticism</td>
<td>6.08</td>
<td>7.35</td>
<td>17.50</td>
<td>1.81</td>
</tr>
<tr>
<td></td>
<td>Femininity</td>
<td>19.04</td>
<td>19.95</td>
<td>9.00</td>
<td>&lt; 1.00</td>
</tr>
<tr>
<td></td>
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<td>9.95</td>
<td>27.10</td>
<td>1.81</td>
</tr>
<tr>
<td></td>
<td>Composite</td>
<td>33.50</td>
<td>37.55</td>
<td>178.93</td>
<td>3.12</td>
</tr>
</tbody>
</table>

Univariate F tests df = 1,40
Lambda Criterion F Ratio = 3.942; p < .001; df = 12,29

* p < .05
** p < .01
*** p < .001
TABLE 6

MEANS, STANDARD DEVIATION AND P VALUES ON GROUP MEMBERSHIP FOR WIECHEL AND SEARS TESTS SHOWING FOUR INDIVIDUAL SCHOOL DISTRICTS

<table>
<thead>
<tr>
<th>District 3</th>
<th>Variable</th>
<th>Experimental Group</th>
<th>Control Group</th>
<th>MS</th>
<th>Univariate F Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Wiechel Test</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Socio A</td>
<td>.66</td>
<td>.73</td>
<td>.46</td>
<td>.51</td>
</tr>
<tr>
<td></td>
<td>Socio B</td>
<td>.95</td>
<td>1.07</td>
<td>1.30</td>
<td>1.03</td>
</tr>
<tr>
<td></td>
<td>Recorded Role Playing</td>
<td>10.04</td>
<td>3.58</td>
<td>9.07</td>
<td>2.46</td>
</tr>
<tr>
<td></td>
<td>Role Cooperation--Pictorial</td>
<td>5.23</td>
<td>3.27</td>
<td>4.76</td>
<td>.72</td>
</tr>
<tr>
<td></td>
<td>Different Things to Do</td>
<td>18.14</td>
<td>4.94</td>
<td>16.92</td>
<td>4.83</td>
</tr>
<tr>
<td></td>
<td>Describing Words</td>
<td>35.52</td>
<td>12.61</td>
<td>27.07</td>
<td>7.47</td>
</tr>
<tr>
<td></td>
<td>Cooperation</td>
<td>15.42</td>
<td>1.77</td>
<td>16.23</td>
<td>1.73</td>
</tr>
<tr>
<td></td>
<td>Composite</td>
<td>86.00</td>
<td>17.92</td>
<td>75.84</td>
<td>9.09</td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Self-Criticism</td>
<td>8.42</td>
<td>3.54</td>
<td>7.38</td>
<td>3.12</td>
</tr>
<tr>
<td></td>
<td>Femininity</td>
<td>17.33</td>
<td>4.86</td>
<td>19.76</td>
<td>3.94</td>
</tr>
<tr>
<td></td>
<td>Ideas of Reference</td>
<td>10.33</td>
<td>4.49</td>
<td>9.30</td>
<td>3.54</td>
</tr>
<tr>
<td></td>
<td>Composite</td>
<td>35.95</td>
<td>8.00</td>
<td>36.46</td>
<td>1.29</td>
</tr>
</tbody>
</table>

Univariate F tests df = 1,30  
Lambda Criterion F Ratio = 1.105; p .410; df = 12,19

* p < .05  
** p < .01  
*** p < .001
TABLE 7
MEANS, STANDARD DEVIATION AND P VALUES ON GROUP MEMBERSHIP FOR WIECHEL AND SEARS TESTS SHOWING FOUR INDIVIDUAL SCHOOL DISTRICTS

<table>
<thead>
<tr>
<th>District 4</th>
<th>Variable</th>
<th>Experimental Group</th>
<th>Control Group</th>
<th>MS</th>
<th>Univariate F Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td></td>
</tr>
<tr>
<td>Wiechel Test</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Socio A</td>
<td>.60</td>
<td>.81</td>
<td>.55</td>
<td>.60</td>
<td>.03</td>
</tr>
<tr>
<td>Socio B</td>
<td>1.24</td>
<td>1.12</td>
<td>1.05</td>
<td>.94</td>
<td>.40</td>
</tr>
<tr>
<td>Recorded Role Playing</td>
<td>11.80</td>
<td>3.29</td>
<td>10.25</td>
<td>2.40</td>
<td>26.69</td>
</tr>
<tr>
<td>Role Cooperation--Pictorial</td>
<td>7.00</td>
<td>3.70</td>
<td>4.65</td>
<td>2.87</td>
<td>61.36</td>
</tr>
<tr>
<td>Different Things to Do</td>
<td>19.20</td>
<td>4.94*</td>
<td>14.70</td>
<td>5.36</td>
<td>225.00</td>
</tr>
<tr>
<td>Describing Words</td>
<td>37.20</td>
<td>8.98</td>
<td>29.60</td>
<td>12.89</td>
<td>642.00</td>
</tr>
<tr>
<td>Cooperation</td>
<td>14.48</td>
<td>3.13</td>
<td>13.90</td>
<td>3.16</td>
<td>3.74</td>
</tr>
<tr>
<td>Composite</td>
<td>91.52</td>
<td>16.59</td>
<td>74.70</td>
<td>18.22</td>
<td>3143.44</td>
</tr>
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<td>Sears Test</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-Criticism</td>
<td>9.28</td>
<td>3.57</td>
<td>7.20</td>
<td>3.42</td>
<td>48.07</td>
</tr>
<tr>
<td>Femininity</td>
<td>19.44</td>
<td>3.86</td>
<td>19.70</td>
<td>4.05</td>
<td>.75</td>
</tr>
<tr>
<td>Ideas of Reference</td>
<td>11.36</td>
<td>3.23</td>
<td>10.85</td>
<td>3.58</td>
<td>2.90</td>
</tr>
<tr>
<td>Composite</td>
<td>40.08</td>
<td>7.55</td>
<td>37.75</td>
<td>8.34</td>
<td>60.32</td>
</tr>
</tbody>
</table>

Univariate F tests df = 1,41
Lambda Criterion F Ratio = 1.037; p .443; df = 12,30

* p < .05
** p < .01
*** p < .001
The Sociometric subtests deserve attention. The subjects selected classmates with whom they wished to work, travel, or choose as leaders. Only opposite sex choices received a score and the explanation of same sex choices based on developmental stage (rather than cultural influence) should be given consideration. It should be noted that while the composite score on Socio B was significant, the effect was dependent on District 1 only and the results for none of the other districts approached significance. The experimenter feels that the District 1 result is anomalous and regards the test to be basically insensitive.

A second method of comparison involved the Pearson product-moment correlation coefficients based on the same subtests, with experimental group/control group as the dichotomous variable. The correlation results are shown in the rightmost column of Table 8. To facilitate comparison of the correlation coefficients with pooled district Wiechel mean score differences, Wiechel significance levels better than 5% are in the other columns.

The highest correlation coefficients are in the middle .30s and they tend to correspond to the best significance levels. The three most sensitive subtests on the basis of correlation coefficients are Recorded Role Playing \((r = .30)\), Different Things to Do \((r = .34)\), and Describing Words \((r = .35)\). The experimental group/control group results in Table 3 and the correlational data in Table 8 show agreement in the same three subtests. It should be noted that the serial
TABLE 8

COMPARISON OF EXPERIMENTAL AND CONTROL GROUPS ON THE WIECHEL TEST IN TERMS OF SIGNIFICANCE LEVELS FROM UNIVARIATE ANALYSES AND CORRELATIONS (r's)

<table>
<thead>
<tr>
<th>Wiechel Subtests</th>
<th>Pooled</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>r</th>
</tr>
</thead>
<tbody>
<tr>
<td>Socio A</td>
<td>.03</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Socio B</td>
<td>.04&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.002</td>
<td></td>
<td></td>
<td></td>
<td>.16*</td>
</tr>
<tr>
<td>Recorded Role Playing</td>
<td>.001</td>
<td>.001</td>
<td></td>
<td></td>
<td></td>
<td>.31***</td>
</tr>
<tr>
<td>Role Cooperation --Pictorial</td>
<td>.03</td>
<td></td>
<td>.03</td>
<td></td>
<td></td>
<td>.17**</td>
</tr>
<tr>
<td>Different Things To Do</td>
<td>.001</td>
<td>.05</td>
<td>.001</td>
<td></td>
<td></td>
<td>.34***</td>
</tr>
<tr>
<td>Describing Words</td>
<td>.001</td>
<td>.001</td>
<td>.04</td>
<td>.03</td>
<td></td>
<td>.35***</td>
</tr>
<tr>
<td>Cooperation</td>
<td>.004</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.11</td>
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<tr>
<td>Composite</td>
<td>.001</td>
<td>.03</td>
<td>.001</td>
<td></td>
<td></td>
<td>.003</td>
</tr>
</tbody>
</table>

(a) p values for univariate analyses are entered only for levels < .05.

(b) significance levels for r's

* p < .05
** p < .01
*** p < .001
order of the administration of the subtests probably was not a factor, inasmuch as the least significant tests, Sociometric A and Cooperation occurred first and last, respectively.

The different apparent sensitivities of the differences among the subtests may be explained in that the group activities and tasks involved in the workshop experience have a more direct relationship to what is being measured on these subtests. That is, some tasks were less abstract and more "teachable" than those associated with other subtests. Further, it appears that task cooperation between the sexes which is measured by the Sociometric and Cooperation subtests is a more subtle concept and, at this developmental stage (between ages 9 and 11), such new and unfamiliar concepts should be introduced on a more substantive level. It is also possible that the construct validity of these less sensitive subtests is insufficient for the adapted version of the test.

In summary, the hypothesis was confirmed. It may be concluded from the pooled data of the four school districts that the workshop was effective in changing the girls' sex-role perceptions, specifically, an eight week career awareness workshop can change the sex-type attitudes of fifth grade girls. The effect was consistent among school districts. The analysis also pointed to certain subtests as being more "sensitive," possibly because of inherent teachability of the underlying concept behind the subtests or within the construct validity of the least sensitive scales of this adaptation, since Wiechel's original research included boys.
Hypothesis II. Fifth grade girls who have higher self-esteem as measured on the Sears Self-Concept Inventory are significantly less stereotypic in their sex-role perceptions, as measured by the Wiechel Sex-Role Perception of Task Test, than girls with lower self-esteem.

Sears' theory of self-esteem and this hypothesis imply that girls who had higher self-esteem would tend to be less stereotypic based on internalized self-confidence. If these subjects had had early experiences of parental warmth and acceptance, and possibly higher levels of school or motor competency, it was hypothesized that they would be more open in their perception of activities and occupations than subjects who had lower self-esteem.

A direct test of the hypothesis was done by means of a Pearson product-moment correlation calculated from the control and experimental groups combined. Entries were the composite Wiechel and composite Sears scores. The correlation was .08, which was not significantly different from zero. It is evident that Hypothesis II was not supported.

Even if the workshop might have had a positive effect on self-concept, such an effect would probably be weak relative to such long term influences as the traditional role models passed from mother to daughter. The present experiment could not attempt to measure this or other kinds of influence. It may be noted, however, that reinforcement of highly feminine behavior in girls did not tend to raise self-concept (in
the sense of absence of role conflict) among subjects in this study.

Still another explanation of the lack of relationship between self-concept and stereotypy might be attributable to the effect of increased awareness of changing roles, abilities, and opportunities which would have a negative effect on self-image. Knowledge acquired within the group would increase self-awareness; simultaneous self-comparisons and self-criticism might diminish self-concept if the individual finds a discrepancy between self-expectation and performance. Again, the data did not support this hypothesis in the time-limited situation.

In summary, the analysis indicated that Hypothesis II cannot be supported and it may be concluded that girls who have higher self-esteem are not less stereotypic in attitudes concerning sex-roles.

Hypothesis III. Fifth grade girls have higher self-esteem if they have participated in career awareness discussion groups.
Earlier studies have indicated improved change in self-concept as a result of group involvement.\(^2\),\(^3\),\(^4\),\(^5\) Since the dynamics of participation in career awareness groups were comparable to other kinds of counseling groups, changed self-concept might be an outcome of the group meetings.

Data for self-concept consisted of the Sears scores which are displayed in Tables 3, 4, 5, 6, and 7 where higher scores reflect lower self-concept. Scores on the Sears ranged between 59 and 17 for the experimental group and 55 and 19 for controls.

Inspection of Table 3 indicates that the pooled district means are nearly equal (36 vs. 37), and that near equality holds for the individual districts as well. The statistical analysis confirmed this, as shown in Table 3, where the Sears composite F ratio is less than 1.

Table 3 also displays pooled district data for the Sears subtests. Only the Femininity score was significant (p < .02). Tables 4, 5, 6, and 7, which show the results of


the analyses for each district, showed no significant differences between the experimental and control groups. Though the Femininity scale difference for the pooled group was significant, the effect appeared to be rather weak in not being demonstrated on any individual district level. To further examine the sensitivity of this subtest, a correlation was computed for Femininity using experimental/control groups as dichotomous variables. The resultant correlation was .17 (other Sears subtests and the composite correlations were less than .07); evidently this factor may be considered to be unimportant.

It may be noted that the MANOVA cited in Hypothesis I incorporated the Sears subtests and composite score. That the MANOVA for the pooled group showed a significant difference is indicative of the effect of the Wiechel subtests and not indicative of influence by the Sears tests.

The results in sum indicate that the components of self-esteem identified by Sears are resistant to the influence of an eight hour workshop. Only the Femininity component showed a possible sign of plasticity. Although the magnitude of the scores indicated that according to normative data provided by Sears, about 80% of the girls could benefit from improved self-esteem, the workshop experience did not prove effective.

Hypothesis IVa. Fifth grade girls whose mothers are employed outside the home are less stereotypic in their sex-role perception of activities than those girls whose mothers have no outside employment.
Table 1 displayed percentages of employed mothers in the two groups and indicated that there was a substantial number among both groups (42% worked in the experimental group and 49% in the control group).

The statistical analysis of the effect of maternal employment is shown in Table 9 and displays results of comparisons on subtests. No difference was significant. The multivariate Wilks Lambda criterion yielded an F ratio of .72 which is nonsignificant as well.

These results indicate that subjects whose mothers were employed were not consistently less stereotypic than those girls whose mothers were not employed. The many conditions which are subsumed under the employed-unemployed dichotomy may well produce a wide variety of attitudes in daughters.

As explained in Chapter II, attitudes of daughters of working mothers vary with such factors as maternal satisfaction with the chosen role, father's attitude toward mother's work, agreement on this issue between the parents, status of maternal employment, and child care arrangements. Children's attitude toward maternal employment has also been found to vary with age and sex of the child. Although the single gross factor of employment has been shown to be sufficient to modify attitudes and behavioral patterns within the home, changes are
TABLE 9
FACTORIAL ANALYSIS OF VARIANCE
TEST OF MATERNAL EMPLOYMENT ON POOLED SAMPLE

<table>
<thead>
<tr>
<th>Variable</th>
<th>MS</th>
<th>Univariate F Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Wiechel Test</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Socio A</td>
<td>.78</td>
<td>1.72</td>
</tr>
<tr>
<td>Socio B</td>
<td>1.05</td>
<td>.99</td>
</tr>
<tr>
<td>Recorded Role Playing</td>
<td>17.14</td>
<td>1.78</td>
</tr>
<tr>
<td>Role Cooperation --Pictorial</td>
<td>1.20</td>
<td>.10</td>
</tr>
<tr>
<td>Different Things to Do</td>
<td>54.68</td>
<td>2.06</td>
</tr>
<tr>
<td>Describing Words</td>
<td>3.89</td>
<td>.03</td>
</tr>
<tr>
<td>Cooperation</td>
<td>1.41</td>
<td>.23</td>
</tr>
<tr>
<td>Composite</td>
<td>97.18</td>
<td>.33</td>
</tr>
<tr>
<td><strong>Sears Test</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-Criticism</td>
<td>15.12</td>
<td>1.23</td>
</tr>
<tr>
<td>Femininity</td>
<td>28.58</td>
<td>1.92</td>
</tr>
<tr>
<td>Ideas of Reference</td>
<td>.37</td>
<td>.03</td>
</tr>
<tr>
<td>Composite</td>
<td>97.18</td>
<td>1.50</td>
</tr>
</tbody>
</table>

Multivariate F ratio = .72; p < .04; df 12,154.
not always in the same direction.6, 7

Hypothesis IVb. Fifth grade girls who have participated in career awareness workshops and whose mothers are employed are the least stereotypic in regard to sex-role perception of task (most receptive to androgynous occupational-educational choices).

The hypothesis implies that those subjects participating in the workshops and whose mothers are employed are the highest scorers on the sex-role perception of task test. As in Hypothesis IVa, maternal employment was broadly defined as either part-time or full-time in nature.

The two independent variables, participation in group and maternal employment, define four groups: (1) experimental subjects—employed mothers, (2) experimental subjects—unemployed mothers, (3) control subjects—employed mothers, and (4) control subjects—unemployed mothers.

Data relevant to these hypotheses are shown in Table 10, where Wiechel score means and standard deviations are displayed for the four groups. The hypothesis requires a comparison of the means for daughters of employed vs. unemployed mothers. The means are 84.2 for girls with employed mothers and 83.4 for girls with unemployed mothers. These means were not significantly different \( F = 1.23, p < .20, \) df 3,165.


TABLE 10

COMPARISON OF STEREOTYPY AND MATERNAL EMPLOYMENT FOR WIECHEL COMPOSITE SCORES

<table>
<thead>
<tr>
<th>Group</th>
<th>Employed</th>
<th>Unemployed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>92.7</td>
<td>89.2</td>
</tr>
<tr>
<td>SD</td>
<td>18.6</td>
<td>17.8</td>
</tr>
<tr>
<td>N</td>
<td>42</td>
<td>59</td>
</tr>
<tr>
<td>Control</td>
<td>73.4</td>
<td>74.7</td>
</tr>
<tr>
<td>SD</td>
<td>19.8</td>
<td>12.0</td>
</tr>
<tr>
<td>N</td>
<td>33</td>
<td>35</td>
</tr>
<tr>
<td>Pooled Sample</td>
<td>84.2</td>
<td>83.4</td>
</tr>
<tr>
<td>SD</td>
<td>21.4</td>
<td>17.3</td>
</tr>
<tr>
<td>N</td>
<td>75</td>
<td>94</td>
</tr>
</tbody>
</table>

In order to examine the interaction, a univariate analysis of variance was conducted with groups and maternal employment as factors. The results of the analysis are displayed in Table 11. It is evident that the interaction effect, with an F ratio of < 1.00, is not significant.
TABLE 11
ANALYSIS OF VARIANCE ON WIECHEL VS. MATERNAL EMPLOYMENT
(POOLED GROUPS)

<table>
<thead>
<tr>
<th>Variable</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group (G)</td>
<td>1</td>
<td>11138.29</td>
<td>36.03</td>
<td>.001</td>
</tr>
<tr>
<td>Maternal Employment (ME)</td>
<td>1</td>
<td>98.82</td>
<td>&lt;1.00</td>
<td>NS</td>
</tr>
<tr>
<td>G x ME</td>
<td>1</td>
<td>230.66</td>
<td>&lt;1.00</td>
<td>NS</td>
</tr>
<tr>
<td>Error</td>
<td>165</td>
<td>302.25</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

To interpret, among families of students in this sample group a wide variety of adult women employment conditions existed. It is possible that within a fairly culturally advantaged group, the influence of maternal employment on stereotypy is undifferentiated due to subjects' exposure to numerous employment situations among family members and in the media. It is possible that occupational diversity among mothers in this group may have resulted in a level of confusion that can be improved only by direct, small group counseling as done in the workshop.

A second reason for the failure to replicate the maternal employment finding as postulated in IVa and IVb might have been that the data obtained from the mothers were too gross. There was insufficient information in each relatively narrow category to provide reliable or consistent data for significance, and the general division into "employed" or
"unemployed" did not disclose influence on daughters' sex-role perceptions. If, for example, it had been possible to obtain detailed, reliable data on type of employment, e.g., professional vs. non-professional, economic or psychological need for employment, and had the sample size been large enough to support multiple classification, correlation with narrow factors might have been found.

In summary, Hypotheses IVa and IVb were not supported; maternal employment in combination with workshop participation did not reduce sex-role stereotypy beyond the reduction brought about by participation alone.

Additional Data

Additional information was contributed by parents, teachers, and group leaders. In all cases, in order to make the data comparable, the experimenter converted the observations to ratings on a nine point or three point scale. The teachers' data consisted of separate ratings of subjects' adjustment and achievement at school. The group leaders' data consisted of ratings of students' degree of activity in career awareness workshops. The parents' data consisted of combined ratings of their daughters' achievement and adjustment. Correlation coefficients were computed for the ratings and Wiechel composite scores for each subject.

Table 12 shows pertinent correlation coefficients. It can be seen that a moderate correlation obtained between group leader report and Wiechel composite score (.45, p < .001). A
much weaker correlation of .18 was found between the Wiechel composite scores and teachers' ratings of adjustment, although it was significant ($p < .01$). No appreciable correlation was found between Wiechel composite scores and parents' ratings.

**TABLE 12**

INTERCORRELATIONS FOR PARENT-TEACHER-GROUP LEADER EVALUATIONS

<table>
<thead>
<tr>
<th>Variable</th>
<th>Teacher Estimate of Adjustment</th>
<th>Teacher Estimate of Achievement</th>
<th>Wiechel Composite Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent Report (Combined Adjustment and Achievement)</td>
<td>-.13</td>
<td>.15</td>
<td>.05</td>
</tr>
<tr>
<td>Group Leader Report (Activity)</td>
<td>.54***</td>
<td>.21*</td>
<td>.45***</td>
</tr>
<tr>
<td>Teacher Report (Adjustment)</td>
<td>---</td>
<td>---</td>
<td>.18**</td>
</tr>
</tbody>
</table>

* $p < .05$
** $p < .01$
*** $p < .001$

In interpreting the data, one can conclude that degree of activity in a workshop tends to be associated positively with lower sex-role stereotypy. The perceptions of the professionals were apparently more in agreement with each other than with those of the parents with regard to adjustment in school and reported activity in the workshops. The
disagreements of parents' estimates of adjustment may be due, at least in part, to their lesser familiarity with their daughters' behavior in the school setting.

Summary

Present results indicate that despite the probable reinforcement of traditional sex-role behavior in life situations, the sex-stereotypic attitudes of fifth grade girls can be reduced by direct teaching-counseling methods in a group situation. Such children retain some plasticity in the sense that exposure to direct intervention techniques in a relatively short span of eight one hour sessions can significantly modify their attitudes toward sex-role stereotyping. It is not known from this study whether or not the substantial change in stereotypy would persist over a longer period of time.

With respect to self-concept, it was found that (1) these girls for the most part appear to demonstrate lower degrees of this component in comparison with Sears' original normative group, (2) although studies, cited earlier, have shown a positive change in self-concept due to group involvement, the workshop experience was not effective in improving self-concept during the time-limited period, (3) the lack of support for a positive change in self-concept was also lack of support for the inverse condition to the effect that high stereotypy mediated by high femininity was associated with high self-concept. No relationship between self-concept and stereotypy was obtained in this study.
The third factor of maternal employment showed no influence on stereotypy. It is possible that failure to demonstrate an effect was due to the gross nature of data collected.

This experiment was successful in demonstrating that sex-typed attitudes of fifth grade girls can be modified in an eight week workshop experience in the school setting. In addition, the adaptation of the Swedish-developed Wiechel test was effective in its first use with a comparable population of American students. Four of the seven Wiechel subtests were found to be especially sensitive in the measurement of stereotypy. Finally, it seems that the girls who were better adjusted in school and were active participants in workshops were more susceptible to improvement in their perceptions of sex-role stereotypes.

The major finding of this experiment, that an eight hour workshop is effective in reducing sex-role stereotypy, should be taken as justification for the adoption of a similar program in the elementary schools. The goal of such a program is consonant with the important societal goal of preparing school girls for a wider than traditional level of occupational achievement.

The failure of the study to demonstrate a positive relationship between maternal employment and self-concept to stereotypy does not diminish their importance in this context. The implication of the failure is that a short-term workshop
program should not attempt to directly achieve changes in deeper personality areas.
CHAPTER V

CONCLUSION AND RECOMMENDATIONS

Introduction

The phenomenon of sex-role stereotypy in society continues to be pervasive despite the well-known efforts of concerned groups to generate a higher level of awareness and interest in the topic. The results of this socialization are such that girls tend to acquire stereotypes which seem to limit their occupational expectations and performance in contrast with that of boys.

There has been slight progress in the expansion of educational opportunities for females, a trend toward equalization of athletic programs for girls, and the opening of more career and life style options open to women. However, a major difficulty seems to be one of preparing girls for changed sex-role expectations and responsibilities. There is still a need for more organized educational programs which bring attention to these issues and which develop better methodologies to help girls overcome such deficits.

Objectives

The major purpose of this study was to investigate whether a workshop activity in a school environment is
effective in changing the sex-role stereotypic perceptions of fifth grade girls. This age range was selected on the assumption that attitudes and behaviors with respect to such perceptions are not so fixed as to be unmodifiable without special intervention. The study also examined the girls' self-concept and maternal employment in an effort to determine whether sex-role stereotyping was related to these factors.

Examination of current literature and observation of guidance needs in making occupational choices among elementary school girls initiated this study and led to the following hypotheses.

Hypotheses

The specific hypotheses were:

1. Fifth grade girls who have participated in career awareness workshops are significantly less stereotypic in their perception of sex-typed activities than those who have not participated in these discussions.

2. Fifth grade girls who have higher self-esteem as measured on the Sears Self-Concept Inventory, are significantly less stereotypic in their sex-role perceptions, as measured by the Wiechel Sex-Role Perception of Task Test, than girls with lower self-esteem.

3. Fifth grade girls have significantly higher self-esteem if they have participated in career awareness discussion groups than if they have not participated.
4a. Fifth grade girls whose mothers are employed outside the home are significantly less stereotypic in their sex-role perceptions than those girls whose mothers have no outside employment.

4b. Fifth grade girls who have participated in career awareness workshops and whose mothers are employed are the least stereotypic in regard to sex-role perception of task (most receptive to occupational-educational choices).

Methodology

Preexperimental Study

Prior to the major research, a brief study of test instruments was conducted to determine, first, the content validity of the Wiechel Sex-Role Perception of Task Test (WS-RT) which had been developed in Sweden, and second, local normative data for the Sears Self-Concept Inventory (SS-CI).

Setting

The experiment was conducted in four suburban public school districts in middle to upper-middle socioeconomic areas. The workshops and testing were conducted during the regular school day.

Subjects

The subjects consisted of 169 fifth grade girls. They were randomly divided into 101 in the experimental group and 68 in the control group.
Leaders

The six selected group leaders were female graduate students in a guidance and counseling program or women with some counseling experience. Group leaders were given training previous to the formation of student groups and concurrent with group meetings.

Career Awareness Groups

Nine groups of approximately 10-12 fifth grade girls met for eight consecutive weeks with the adult leaders. Discussion consisted of occupational information, present trends in female employment opportunities, and personal vocational goals. Androgynous activities appropriate for this age group were also discussed. Group techniques and high-interest materials were used to sustain attention.

Measurement

Subjects in the experimental and control groups were tested during the ninth week of the experiment. The instruments used in the experiment were: (1) Wiechel Sex-Role Perception of Task Test (WS-RT), (2) Sears Self-Concept Inventory (SS-CI), (3) Teacher Reports, (4) Parent Reports, and (5) Group Leader Weekly Records. The latter three sources were converted into ratings.

Data Analysis

The data were analyzed by various statistical methods including univariate and multivariate analyses of variance,
and correlation coefficients as appropriate.

Results

Analysis of the data for Hypothesis I supported a conclusion that the participants in the workshops significantly changed sex-role stereotypic perceptions in the expected direction ($p < .001$). The WS-RT subtests that exhibited the greatest sensitivity to change were Recorded Role Playing (RRP) ($p < .001$), Role Cooperation Pictorial (RCP) ($p < .03$), Different Things to Do (DTTD) ($p < .001$), and Describing Words (DW) ($p < .001$). These subjects involved responding to tape recorded dialogues enacting sex-typed activities, pictorial representations of similar activities, and checklists of familiar activities and occupations. These tests were more vivid and concrete than the less sensitive subtests.

None of the other hypotheses was supported, implying that there was no change in self-concept as a result of workshop experience, and that there was no evidence that the condition of maternal employment categorized as "employed" or "unemployed" had any significant association with sex-role perceptions.

Additional data derived from the ratings indicated that active participation in workshops is correlated with change in sex-role perception. Parents' ratings of their childrens' adjustment and achievement appeared to be an unrealistic predictor of sex-role perception.
Summary

In summary, the initial use of the WS-RT with an American population was successful. The underlying philosophy and content of the present adaptation were true to the original form. The major finding was that the workshops did improve the girls' perceptions of selected activities and occupations in the direction of reduced sex-role stereotypy. The "success" of the experiment also implies that sex-role stereotypy transcends the immediate culture and, in this way, the Swedish and American cultures seem to be similar. Other similarities in the elementary educational setting between the two countries exist in the tasks and techniques which were easily understood and integrated by both groups of children. In both countries it was possible to alter stereotypic sex-role attitudes through a planned school program within a relatively short time.

Inspection of the WS-RT alone does not identify its strengths and weaknesses. On the present American population, it was demonstrated that subtests were not equally sensitive in measuring changed attitudes. The best subtests were Recorded Role Playing, Different Things to Do, and Describing Words. The least sensitive subtest was Cooperation, with the Sociometric subscales showing questionable results. It was concluded that the sensitive subtests measured the workshop activities in a more concrete way and that, perhaps, the factors tested by the Cooperation and Sociometric subtests were too abstract.
Maternal employment categorized grossly as "employed" and "unemployed" did not show significant association with either girls' sex-role stereotypy or self-concept. There was no change in self-concept as a result of participation in groups.

Conclusions and Observations

The major result of this experiment was that in a school setting, a workshop designed to modify sex-role attitudes in 9-11 year old girls can be effective. A successful workshop can consist of group discussion and materials mainly covering the occupational opportunities and avocational activities becoming available to women, and can be led by leaders who are not classroom teachers.

Conclusions

The principal work with which the present study can be compared are those of Guttentag, Iglitzen, and Wiechel.\(^1\),\(^2\),\(^3\) Guttentag studied first, fifth, and ninth graders (boys and girls) in a variety of ethnic communities. Experimental methods designed to change perceptions involved preparing


classroom teachers to carry out the behavior modification. The Guttentag result was that while the girls improved in their sex-role perceptions, the boys became more stereotypic. To the extent that boys' perceptions worsened, it appears that a classroom methodology is less than effective.

Iglitzen investigated only the existence of sex-role stereotypy, not a method of changing the perceptions. Wiechel attempted to change the sex-role perceptions for the American equivalents of fifth and seventh grade girls and boys in school environments. Instructors were regular classroom teachers. He found diminished sex-role stereotypy and increased cooperation.

The important difference between these studies and the current one was the use of leaders who were not school teachers already familiar to the students. That this approach was effective indicates that there is a realistic alternative to using teachers in the usual schoolroom setting.

The lack of evidence in the present study for any change in self-concept could be due to a number of causes. For example, it should be recalled that the workshop was designed primarily to modify sex-role stereotypy, and that the group leaders were not trained in methods capable of modifying profound personality traits, such as self-concept. The experiment examined the possibility that a positive change in self-concept due to the group experience itself might accrue as a "side effect." Second, it is possible that self-concept is too firmly set by ages 9-11 to be changed appreciably by only
eight one hour workshops in a school setting. If these points are true, only a more intensive counseling treatment with professionally trained leaders can be effective.

The study supports Guttentag's result to the effect that maternal employment is not related to sex-role stereotypy. Among the more plausible explanations of the continuing lack of correlation would seem to be that either sex-role stereotypy is more strongly based on perception outside the home than inside, and that only specific conditions of maternal employment demonstrate the effect. For example, professional and economic status of mothers may influence daughters in a way different from that of other employed mothers. The age of daughters may be an important developmental factor too.

**Recommendations**

1. On the assumption that improving girls' sex-role perceptions is desirable, develop career awareness workshops at the elementary school level in conjunction with a vocational guidance program. The workshop approach using leader-counselors should be adapted for different grade levels with age-appropriate materials and activities.

2. Since this was a short-term study, it did not show whether the improved stereotypy would persist. It would be desirable to conduct additional studies using the workshop approach with provisions for measuring the long-term effects of instruction. A longitudinal study of the attitudes and activities of the girls who had participated in the present
research project should also be studied.

3. The possibility that changes in self-concept beginning with significant change in sex-role perception should not be ruled out. Future programs concerned with modifying sex-role attitudes should monitor self-concept over a longer period of time.

4. The study confined itself to the study of girls. Workshops should be conducted to compare the effectiveness of boys' groups and sexually mixed groups using the same workshop-group leader methodology.

5. Since the study indicated that the workshop approach utilizing a female counselor-leader was effective in diminishing stereotypy with fifth grade girls, workshops of a similar type should be conducted using male counselor-leaders with boys' groups.

6. It was not known if the present experiment was affected by differences in group leaders. Future experimental workshops should attempt to more effectively control for differences among group leaders' attitudes, personality, and experience.

7. Investigate in greater detail the types, status and attitudes toward employment of subjects' parents with respect to the influence of these factors on stereotypy among elementary school children.

8. Regarding the question of maternal employment, another research approach should make mothers the primary basis of the sample in order to focus on those employment
categories which might have differential effects on daughters' sex-role stereotypes. For example, one could compare a sample of mothers in high income jobs with those in low income jobs with respect to daughters' attitudes among children in this age group.

9. Although the Wiechel Sex-Role Perception of Task Test which was developed in Sweden proved to be an adequately sensitive instrument for American girls, additional testing and development should be done to refine the sensitivity of subscales. Perhaps, for example, the Sociometric A and B and Cooperation subtests could be dropped and new subtests devised.

10. The nature of the Wiechel subtests which were most effective suggests the kind of subject material that should be stressed in new subtests and workshops. In particular it was found that subtests consisting of auditory, visual, and list presentations of choice, in a wide variety of occupations and ordinary situations were more sensitive. Therefore, short-term workshops and revised tests should emphasize subject matter of this kind.
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APPENDIX A

WIECHEL SEX-ROLE PERCEPTION OF TASK TEST (WS-RT)
I. SOCIOMETRIC ANALYSIS

1. Alphabetical listing of class role for sociometric analysis. See example below.

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
<th>Role</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gina A</td>
<td>Peter M</td>
<td>Gina B</td>
<td>Jerry C</td>
</tr>
<tr>
<td>Linda A</td>
<td>John M</td>
<td>Linda A</td>
<td>Keith M</td>
</tr>
<tr>
<td>Gina B</td>
<td>Scott M</td>
<td>Gina B</td>
<td>Scott M</td>
</tr>
<tr>
<td>Jerry C</td>
<td>Richard F</td>
<td>Jerry C</td>
<td>Salvadore F</td>
</tr>
<tr>
<td>Andrew C</td>
<td>Robert R</td>
<td>Andrew C</td>
<td>Michelle G</td>
</tr>
<tr>
<td>Richard F</td>
<td>Amy R</td>
<td>Richard F</td>
<td>Tamara W</td>
</tr>
<tr>
<td>Salvadore F</td>
<td>Mimi S</td>
<td>Salvadore F</td>
<td>Deborah G</td>
</tr>
<tr>
<td>Michelle G</td>
<td>Tamara W</td>
<td>Michelle G</td>
<td>Elisa G</td>
</tr>
<tr>
<td>Deborah G</td>
<td>Maureen W</td>
<td>Deborah G</td>
<td>Frank K</td>
</tr>
<tr>
<td>Elisa G</td>
<td>Wynne Z</td>
<td>Elisa G</td>
<td>Kim K</td>
</tr>
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<td>Frank K</td>
<td></td>
<td>Frank K</td>
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</tr>
<tr>
<td>Kim K</td>
<td></td>
<td>Kim K</td>
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</tr>
</tbody>
</table>

2. Alphabetical listing of class role a and b for sociometric selection. See example below.

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
<th>Role</th>
<th>Name</th>
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<tbody>
<tr>
<td>Janet A</td>
<td>Richard H</td>
<td>Janet A</td>
<td>Renata B</td>
</tr>
<tr>
<td>Renata B</td>
<td>Cesar J</td>
<td>Renata B</td>
<td>Roderick B</td>
</tr>
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<td>Roderick B</td>
<td>Jill K</td>
<td>Roderick B</td>
<td>Joan B</td>
</tr>
<tr>
<td>Joan B</td>
<td>Thomas L</td>
<td>Joan B</td>
<td>Marryl B</td>
</tr>
<tr>
<td>Marryl B</td>
<td>Emily L</td>
<td>Marryl B</td>
<td>Erin B</td>
</tr>
<tr>
<td>Erin B</td>
<td>Lizabeth L</td>
<td>Erin B</td>
<td>Donald C</td>
</tr>
<tr>
<td>Donald C</td>
<td>Marlene M</td>
<td>Donald C</td>
<td>Dominic C</td>
</tr>
<tr>
<td>Dominic C</td>
<td>Sean P</td>
<td>Dominic C</td>
<td>Jeffrey C</td>
</tr>
<tr>
<td>Jeffrey C</td>
<td>Adam S</td>
<td>Jeffrey C</td>
<td>Pondy F</td>
</tr>
<tr>
<td>Pondy F</td>
<td>Ani S</td>
<td>Pondy F</td>
<td>Erik F</td>
</tr>
<tr>
<td>Erik F</td>
<td>Julie T</td>
<td>Erik F</td>
<td>Maribeth H</td>
</tr>
<tr>
<td>Maribeth H</td>
<td>James W</td>
<td>Maribeth H</td>
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</table>
II. RECORDED ROLE PLAYING

<table>
<thead>
<tr>
<th></th>
<th>YES</th>
<th>MAYBE</th>
<th>NO</th>
<th>I DON'T KNOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
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<tr>
<td>18.</td>
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</tr>
</tbody>
</table>
1. WATER
2. PLANT
3. REPAIR
4. POLISH THE CAR
5. SET THE TABLE
6. SERVE COOKIES
HOLD THE BASKET

PICK FRUIT

MAKE THE BED

HOLD THE BABY

THROW A BALL
13. Saw wood

14. Paint the table

15. Take care of the record player

16. Choose the record

17. =

18. =
READ A STORY

LISTEN TO A STORY

SWIMMING

MAKING POTTERY
TAKE A PICTURE

POSE FOR A PICTURE

DRIVE A TRACTOR

PLAY CHECKERS
### III. DIFFERENT THINGS TO DO

<table>
<thead>
<tr>
<th>Usually do</th>
<th>Like to or would like to do</th>
<th>Do With Boys</th>
<th>Do With Girls</th>
<th>Mostly for Boys</th>
<th>Mostly for Girls</th>
<th>Suitable for Both</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Prepare food</td>
<td></td>
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<td></td>
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<tr>
<td>2. Read the newspaper</td>
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<tr>
<td>3. Clean the house (room)</td>
<td></td>
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<tr>
<td>4. Wash clothes</td>
<td></td>
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<tr>
<td>5. Use a hammer, wrench, tools</td>
<td></td>
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<tr>
<td>6. Set the table</td>
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<tr>
<td>7. Babysit</td>
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<td>8. Write a letter</td>
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<td>9. Rake leaves</td>
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<tr>
<td>10. Build a desk</td>
<td></td>
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<tr>
<td>11. Paint furniture, other things</td>
<td></td>
<td></td>
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<tr>
<td>12. Invite friends to visit</td>
<td></td>
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<tr>
<td>13. Take pictures with camera</td>
<td></td>
<td></td>
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<tr>
<td>14. Jump rope</td>
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<td>15. Sew and cut patterns</td>
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<tr>
<td>16. Deliver newspapers</td>
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<tr>
<td>17. Build a motor</td>
<td></td>
<td></td>
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<tr>
<td>18. Race with bikes</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Usually do</td>
<td>Like to or would like to do</td>
<td>Do With Boys</td>
<td>Do With Girls</td>
<td>Mostly for Boys</td>
<td>Mostly for Girls</td>
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</tr>
<tr>
<td>19.</td>
<td>Take out garbage</td>
<td></td>
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</tr>
<tr>
<td>20.</td>
<td>Wash the car</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>21.</td>
<td>Visit museums</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22.</td>
<td>Feed/play with cat or dog</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>23.</td>
<td>Play the record player</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>24.</td>
<td>Make presents</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Finish the following sentences:

1. I don't like **all** boys because ____________________________________________________________________________

2. I don't like **many** boys because ____________________________________________________________________________

3. I don't like **all** girls because ____________________________________________________________________________

4. I don't like **many** girls because ____________________________________________________________________________

(Sentence Completion used for preexperimental study only.)
IV. DESCRIBING WORDS

<table>
<thead>
<tr>
<th></th>
<th>BOYS</th>
<th>GIRLS</th>
<th>BOTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>smart</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>friendly</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>neat</td>
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</tr>
<tr>
<td>4.</td>
<td>noisy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>silly</td>
<td></td>
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</tr>
<tr>
<td>6.</td>
<td>nice</td>
<td></td>
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</tr>
<tr>
<td>7.</td>
<td>helpful</td>
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</tr>
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<td>8.</td>
<td>gentle</td>
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<tr>
<td>9.</td>
<td>boastful</td>
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</tr>
<tr>
<td>10.</td>
<td>sloppy</td>
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</tr>
<tr>
<td>11.</td>
<td>strong</td>
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</tr>
<tr>
<td>12.</td>
<td>tough</td>
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</tr>
<tr>
<td>13.</td>
<td>pretty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14.</td>
<td>careful</td>
<td></td>
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</tr>
<tr>
<td>15.</td>
<td>active</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.</td>
<td>funny</td>
<td></td>
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</tr>
<tr>
<td>17.</td>
<td>tattles</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18.</td>
<td>tricky</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19.</td>
<td>shy</td>
<td></td>
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<td>20.</td>
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<td>prompt</td>
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<tr>
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<td>dishonest</td>
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<tr>
<td>23.</td>
<td>trusting</td>
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<tr>
<td>24.</td>
<td>brave</td>
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<tr>
<td>25.</td>
<td>talkative</td>
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<tr>
<td>OCCUPATIONS</td>
<td>BOYS</td>
<td>GIRLS</td>
<td>BOTH</td>
</tr>
<tr>
<td>------------------------</td>
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</tr>
<tr>
<td>1. letter carrier</td>
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<tr>
<td>business executive</td>
<td></td>
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<td></td>
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<tr>
<td>2. teacher</td>
<td></td>
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<tr>
<td>3. bus driver</td>
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<td>4. doctor</td>
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<tr>
<td>orchestra</td>
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<td>5. conductor</td>
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<td>6. principal</td>
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<td>7. cleaning help</td>
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<td>8. musician</td>
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<td>9. nurse</td>
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<td>10. police work</td>
<td></td>
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<td>11. senator</td>
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<td>12. cook</td>
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<td>13. architect</td>
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<td>14. office workers</td>
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<td>15. nursery teachers</td>
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<td>16. florist</td>
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<td>17. lawyer</td>
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<td>18. reporter</td>
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<td>19. truck driver</td>
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<td>20. pharmacist</td>
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<td>21. sales clerk</td>
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<td>22. engineer</td>
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<td>23. dentist</td>
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<td>24. clothing designer</td>
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<td>25. pilot</td>
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<td>OCCUPATIONS</td>
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<td>GIRLS</td>
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<td>27. jockey</td>
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<td>28. plumber</td>
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<td>29. investment broker</td>
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<td>30. space scientist</td>
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</table>
COOPERATION

Read the questions and statements below and the five possible answers given. Then, pick the answer you think is best and circle the letter in front of that answer.

1. Why should people work together? (Scoring)
   a. to discuss problems 2
   b. to see who works best 1
   c. because someone needs company 1
   d. to learn to help each other 2
   e. don't know 0

2. Who should one work with?
   a. the person you know best 2
   b. the person who wants to be with you 1
   c. the person who belongs to the same group 1
   d. the person who sits closest to you 2
   e. don't know 0

3. Who should be the leader?
   a. my best friend 1
   b. the person most used to leading 1
   c. the smartest (does the best work) 2
   d. the one who wants to lead 2
   e. don't know 0

4. Who makes most of the decisions?
   a. sometimes one, sometimes the other(s) 2
   b. the one who is the strongest 1
   c. the leader 1
   d. the one who knows most of the answers 2
   e. don't know 0

5. How long should people work together?
   a. change partners each time 2
   b. change when they feel like it 1
   c. change sometimes, sometimes have the same partner 1
   d. change when a job is done 2
   e. don't know 0
6. How should you divide the work? (Scoring)
   a. according to partner's interest 2
   b. the leader works the most 1
   c. according to partner's ability 1
   d. the group divides the work 2
   e. don't know 0

7. If one partner disagrees, it is best to
   a. give in 1
   b. talk about it 2
   c. meet half-way, if possible 2
   d. let the leader decide 1
   e. don't know 0

8. If your partner is unable to do an equal share
   a. do exactly your own part 1
   b. do the entire project alone 1
   c. report it to the leader (teacher) 2
   d. work on as much as seems important 2
   e. don't know 0

9. If your feelings are hurt by your partner
   a. fight 1
   b. ignore it 2
   c. try to hurt that person in return 1
   d. try to talk about it 2
   e. don't know 0

10. The partner who did the most (or best) work should
    a. demand a better grade (or higher pay) 2
    b. brag about it 1
    c. share the credit 2
    d. decide never again to work with an unequal partner 1
    e. don't know 0
APPENDIX B

DIRECTIONS AND SCORING FOR

THE WIECHEL SEX-ROLE PERCEPTION OF TASK TEST (WS-RT)
SEX-ROLE PERCEPTION OF TASKS: A FORM OF MEASUREMENT

I. Sociometric Analysis

Distribute a copy of the class list of students' names, in alphabetical order. Instructions to students explain that they must circle some names and clearly number others according to directions. Explain, "You may choose any name(s) that you wish and you may choose the same friend(s) more than once in the following exercises. Your answers will be private and you do not need to tell your classmates whom you picked."

1. Ask, "Which two friends would you most like to have with you on a short vacation trip by bus or plane. Circle two names on the class list. Place the number 1 after the name of the person you would most want to have with you and the number 2 after the person you would next want to have with you. Place numbers 3-4-5-6-7 after the names of five other friends you would like to have with you."

Collect list #1

2. Distribute list #2; a second copy of the same list of names. Say, "On the class list circle the names of two friends you would most want to have with you on a school committee. Place the number 1 after the person's name you would wish to work with most and the number 2 after the one you would next want to have with you. What other five friends would you wish to work with in school? Mark these friends by writing numbers 3-4-5-6-7 after their names."

3. Explain, "On the same list show which classmate you like to have as leader (chairperson) in your group, when you do group tasks. Write L1 in front of the person's name, whom you would want next as leader."

II. Recorded Role Playing--Conflicts in Sex-Role Perception

Instructions: "Now you will hear conversations between Susan, Bill, Stan and Gwen. Listen carefully to what they are saying. Then you will have a chance to answer several questions about their conversations. After each one, there will be a slight pause. After you have heard the question, mark the blank which seems best."
Answer by marking under either "yes," "maybe," "no" or "I don't know." Please give your own opinion; there are no right or wrong answers. Do not ask your neighbor; think for yourself and do your own work."

7th or 8th grade students will read parts and record on cassette.

(1) Stan: You know, Gwen, I have to wash my shirt; it looks dirty. There's laundry detergent at home, isn't there?

Gwen: But Stan, you shouldn't wash your shirt. That's not your job.

Stan: Why not? Where's the laundry detergent? I can wash clothes.

(2) Bill: Have you heard, Stan, that they want me to join the football team? They are really insisting and are trying to convince me. Actually, I'm not very interested in football—that's for sure!

Stan: You mean you're not going to join the team?

(3) Bill: Gwen, yesterday our new neighbors, the Smith's called and asked if someone could babysit. I accepted for you; that's O.K., isn't it? That's what girls are good at.

Gwen: Why should I always have to babysit? You know that you're free and I had planned something completely different for Thursday.

(4) Susan: You're so good at replacing light bulbs aren't you, Stan? They're burned out at the summer cabin again. Take some replacements with you next time you go up to the cottage.

Stan: You can do that yourself. Why should I always have to? You can screw a light bulb in and fix the lamps just as well as I can.
(5) Stan: Well, it's about time to eat now. It's my turn to set the table.

Gwen: You shouldn't have to worry about that. It's Susan's place to do that; she can set the table.

(6) Gwen: You can't invite both boys and girls to your birthday party, Susan. The guys have their own party, so we should have our own and play girls' games.

Susan: You're so fussy. We're all friends.

Gwen: Yes, but this is different! Boys like to play such active games.

Susan: No, it's not different; I like those games too.

(7) Bill: There's a pitching contest again at the park district. I just can't do it again this time. I wish I knew someone else who could organize those guys.

Gwen: I'll be glad to set things up.

Bill: Do you really think you could do it, Gwen?

Gwen: I've done it a lot this spring; we have exactly the same rules for girls.

(8) Gwen: Oh, if I could only get this dress finished. I suppose it won't get finished until summer. I'm just not good at sewing my own clothes.

Susan: But of course—you should be able to make your own clothes; don't all girls take sewing lessons?

Gwen: I guess I'm just not interested in sewing.

(9) Bill: I'm feeling angry and scared. My parents want me to go into business just like my dad and I'm really not going to take an interest in it.

Stan: What do you think you'd like to do?
Bill: Well, you know how much I enjoyed doing that mural; I think I could do much better as an artist, but my family and even our teacher don't take it seriously for a guy's future.

(10) Stan: I really need someone to help me at the game Saturday. We need a referee. Who would you ask, Bill?

Bill: Ask Tom. I know he's careful and fair. He knows that game better than I.

Stan: Tom! Not that guy. He's so shy with people. He runs and hides if someone looks at him.

Bill: Talk to him and you'll see. I think he'd make an excellent referee.

(11) Susan: Our gang decided to organize a trip to the museum. We wanted to look at the early American and colonial costumes. Can you imagine, that South American kid wanted to come with! What does he know about early American dress?

Bill: Didn't you think he'd want to come with, Susan? He's in the same class, you know.

Susan: Yes, but early costumes and dress of this country are of no interest to him, are they?

(12) Susan: Don't you think that JoAnn would make a better secretary of our group than Chuck? Girls are always better secretaries—they can take notes and write better.

Gwen: Why not give Chuck a chance? He seemed to want to be secretary when he was elected.

(13) Stan: You know, that new girl, Mary Jane, is really a whiz in social studies! Her grades are better than mine.

Gwen: Yes, she said that she wants to become a lawyer and work in government some day.

Stan: That's no career for a girl; she'll probably change her mind and quit when she gets married.
(14) Bill: Yesterday I tried to explain to Peter how we do things in our clubs and at our parties. But it wasn't very easy to explain to him.

Stan: I think it's dumb that you're still trying to be friendly with him. He has his friends back there where he lived in Iowa.

Bill: Yes, but he lives here now and wants to be in our club too.

(15) Gwen: Don't you think we'll have to get a new chairperson of our social studies committee? He's no longer in the same level of the class that we are.

Susan: Now he's in a lower level that works more slowly. He's been a good leader, but we probably should change and get a new chairperson.

(16) Gwen: My grade in science is really awful this quarter. I'm so worried; I seem to be getting worse.

Susan: What's the difference? You're a girl and girls never really need math or science when they're finished with school.

(17) Susan: Why couldn't you just say something directly to Mary, Stan? She hung around with us all day wherever we went. It wasn't cool at all.

Stan: She needs friends who show they care about her just now; she's having problems at home, you know.

Susan: We'll never get rid of her; she's so babyish.

(18) Stan: I thought you behaved badly at the party last night, Gwen. You looked awful in those jeans and hardly talked at all. The other girls were more friendly and looked better in skirts.

Gwen: Well, I don't care about them. I want to be as I am--plain, active or bad tempered if I want to be.
Stan: You weren't acting as a girl should.

Recorded Role Playing--Questions

What do you think?

1. Should Stan wash his shirt?
2. Should Bill join the team?
3. Should Gwen babysit?
4. Can Susan fix the lights herself?
5. Should Susan set the table?
6. Should Susan invite only girls to her party?
7. Should Bill let Gwen organize the boys' team?
8. Should Susan sew her own clothes?
9. Do you think Bill should automatically go into business with his father?
10. Should Stan ask Tom to act as referee?
11. Should the new South American student go with the group?
12. Could the group accept Chuck as secretary?
13. Can a girl succeed at a career while being married?
14. Is it "dumb" of Bill to explain things to Peter?
15. Should the committee get a new chairperson?
16. Do girls have as much need as boys for math and science after graduation from school?
17. Does Stan understand about feelings?
18. Is Stan right about Gwen's clothing and behavior?

III. Role Cooperation--(Pictorial)

Distribute pictures of children and corresponding tasks. Say, "On the next pages, you will see pictures of boys and girls, with their names under each picture. Following on the next few pages, there are pictures of things which people may do together; each picture has a number. You will notice that in the margin the same two numbers are repeated. First study the picture; then write the names of the two people after the numbers in the margin, who are working on this activity together. Be sure that you match the name you choose with the right task. There are no right or wrong answers--make your own choice. Do not ask your neighbors."

Collect pages.
IV. Development of Attitude Formation

A. Distribute lists of "Things People Can do" and checklist. Say, "On this page is a list of things people can do. After the list are seven columns with the following headings, (1) I usually do, (2) I like to do, (3) I do sometimes with a boy, (4) I do sometimes with a girl, (5) best suited for boys, (6) best suited for girls and (7) best suited for both. In column 1, place an X in front of all the things you usually do. You may place as many X's as you wish. Then move to column 2; in this column place an X in front of (in the box) all the things you would like most to do; continue the same way in all the columns. You may mark as many X's as you wish in all the columns." Collect papers.

B. Distribute adjective list and occupational list (same sheet). Say, "Here are some words which describe certain people. On your page, place an X under the column "Boys," "Girls" or "Both" for the words which describe them best. You may mark X's in more than one column for the same word. Then, look at the list of occupations and mark an X under the columns, "Boys," "Girls" or "Both" for the people you think might work at these jobs when they grow up. Again, you may mark X's for the same job in more than one column. Read and list carefully. Finally, at the bottom of the page, finish the statements, "I don't like many girls because...", "I don't like many boys because...", "I don't like all girls because...". Write exactly what you want to--what you think and believe. Collect papers.

C. Distribute questions (multiple choice) on cooperation. Say, "Here are ten questions about cooperation. Below each question there are five different answers with a particular letter in front. Choose the answer you think is best and circle the letter in front of that statement. Read each question carefully before answering. Collect papers."
SCORING

I. Sociometric Analysis

Give a point if on

1. girl selects a boy (1 and 2). One additional point for 3-4-5-6-7.

2. a. girl selects a boy (1 and 2). One additional point for 3-4-5-6-7.

   b. group has mixed sexes--if one of two leaders is a boy.

II. Recorded Role Playing--Conflicts in Sex-Role Perception

One point for the following answers:

1. Yes 10. Yes
2. No 11. Yes
3. No 12. Yes
4. Yes 13. Yes
5. No 14. No
6. No 15. No
7. Yes 16. Yes
8. No 17. Yes
9. No 18. No

III. Role Cooperation--(Pictorial)

If figures are marked with one boy and one girl for cooperation, score "1" point.

IV. Development of Attitude Formation

A. One point each for X's in column 7--"both."

B. One point each for X's marked in column 3--"both" for describing words and for occupations.

C. Cooperation--multiple choice--see answer sheet.
APPENDIX C

SEARS SELF-CONCEPT INVENTORY (SS-CI)

TEST, DIRECTIONS AND SCORING
RELATION OF EARLY SOCIALIZATION EXPERIENCES TO SELF-CONCEPTS IN MIDDLE CHILDHOOD

Keyed Scales for Femininity (Fe), Self-Criticism (S-C), and Ideas of Reference (I-R)

The scale to which each item belongs is indicated by the letters in the left margin. The YES or NO answer circled in the right margin is a positive answer with respect to the given scale. Total score for each scale is the number of positive answers circled. A high number is high Fe, S-C or I-R. On the Fe scale, a low number implies masculinity. The items for which no scale is indicated (numbers 1, 9, 29, 37, 47) were derived from Gough's Fe scale, but were not scored in this version.

INSTRUCTIONS: Read each question and decide how you feel about it. If you agree with it and feel it is true about you, draw a circle around YES. If you disagree with a question and feel it is not true about you, draw a circle around NO.

1. Are you very slow in making up your mind? YES NO

S-C 2. Do you often feel sort of guilty without knowing why? YES NO

Fe 3. Do you think you would like the work of a building contractor? YES NO

I-R 4. Do people find fault with you more than you deserve? YES NO

Fe 5. Do you think you would like the work of a dress designer? YES NO

S-C 6. Most of the time, do you feel you are a pretty good person? YES NO

Fe 7. Does it make you kind of mad when you see someone spit on the sidewalk? YES NO

I-R 8. Do you know of anybody who is trying to do you harm? YES NO

9. Is it hard for you to start a conversation with strangers? YES NO

S-C 10. Do you usually feel you are about as good as most of your friends? YES NO
Fe 11. Do you sort of enjoy playing practical jokes on people? [YES NO]
I-R 12. Have your friends ever turned against you? [YES NO]
Fe 13. Do you get very worried when you think other people disapprove of you? [YES NO]
S-C 14. Are you succeeding as well as you should in your school work? [YES NO]
Fe 15. Do bad wind storms really scare you? [YES NO]
I-R 16. Do you usually get your fair chance to talk in a group that is having a social conversation? [YES NO]
Fe 17. Do you think you would like the work of a clerk in a large department store? [YES NO]
S-C 18. Are you worried or unhappy for quite a while after being caught doing some small thing that you shouldn't do? [YES NO]
Fe 19. Do you get excited easily? [YES NO]
I-R 20. Do things often go wrong for you by no fault of your own? [YES NO]
Fe 21. Every now and then do you like to boast about the things you've done well? [YES NO]
S-C 22. Do you often feel that you are a weakling in some ways? [YES NO]
Fe 23. Do you think you would like the work of a garage mechanic? [YES NO]
I-R 24. Do you think people have made quite a lot of fun of you? [YES NO]
Fe 25. Do you like adventure stories better than romantic stories? [YES NO]
S-C 26. Do you consider yourself a happy person? [YES NO]
Fe 27. Do you like a shower better than a bath tub? [YES NO]
I-R 28. Do you often feel shy because of your personal appearance?  

29. Do you agree that the average person is not able to understand art and music very well?  

S-C 30. Do you ever have spells of feeling guilty and ashamed without knowing just why?  

Fe 31. Is the thought of being in an automobile accident very frightening to you?  

I-R 32. Do other children treat you fairly?  

Fe 33. At times do you feel like picking a fist fight with someone?  

S-C 34. Do you sometimes feel that you are pretty much of a fake?  

Fe 35. Do you sometimes have the same dream over and over?  

I-R 36. Are you ever bothered by the feeling that people might be able to read your thoughts?  

37. Do you think you are more strict about right and wrong than most people?  

S-C 38. Do you feel that you are living up to your own ideals?  

Fe 39. Do you think you would like to drive a racing car?  

I-R 40. Do you think your friends talk sarcastically about you behind your back?  

Fe 41. Do you like to be with a crowd who play jokes on one another?  

S-C 42. Are you a sort of sissy about some things?  

Fe 43. Are you somewhat afraid of the dark?  

I-R 44. Do you usually feel as if everyone was staring at you when you enter a room where there are several people you do not know?
Fe 45. Do you think you could do better than most of the present politicians if you were elected to their jobs? YES NO

S-C 46. Would your parents respect you if they knew every single thing you thought about for a whole day? YES NO

47. Do you always try to make the best school grades that you can? YES NO

I-R 48. Do your friends respect you as much as they should? YES NO

Fe 49. Are you inclined to take things hard? YES NO

S-C 50. Do you usually behave as honorably as you ought? YES NO

Fe 51. Would you like to be a soldier? YES NO

I-R 52. Do other people frequently express your ideas and opinions as if they were their own original ideas? YES NO

Fe 53. Do you like to go to parties and other activities where there is lots of noisy fun? YES NO

S-C 54. Do you ever have daydreams which make you ashamed of yourself? YES NO

Fe 55. Do you very much like hunting? YES NO

I-R 56. Have you suspected now and then that your friends deliberately avoided including you in their plans? YES NO

Fe 57. In school, do you sometimes get sent to the principal for too much messing around? YES NO

S-C 58. Do you sometimes feel that you are not as thoughtful of other people as you should be? YES NO

Fe 59. Do you think you would like the work of a librarian? YES NO

I-R 60. Do you feel at ease in an ordinary (social) group made up largely of strangers? YES NO

Fe 61. Do you sometimes feel that you are about to go to pieces? YES NO
S-C 62. Do you feel that you have strong enough will power to satisfy you?

Fe 63. Would you like to be a nurse?

I-R 64. Do you have any bad habits which you feel are forced on you by someone else?

Fe 65. If you were a newspaper reporter, would you like very much to write about movies and plays?

S-C 66. Do you ever worry about yourself and wonder what's to become of you?

Fe 67. Do you like to look at drawings of different kinds of engines and machines?

I-R 68. When you are sitting in the front row of a gathering, do you sometimes feel as if everyone behind you were staring at the back of your neck?

Fe 69. Do you want to be an important person in the community?

S-C 70. Can you stand being criticized without feeling hurt?

Fe 71. Do you feel sort of scared when you move to a strange place?

I-R 72. Have you ever wondered what your friends really think of you?

Fe 73. Do you sometimes feel pretty sure you know how we can settle the international problems we face today?

S-C 74. Does your own stupidity often make you mad?

Fe 75. If you ever got too much change in a store, would you give it back?

S-C 76. Do you guard your health as well as you ought to?
APPENDIX D

TEST FOR CONTENT VALIDITY
TEST FOR CONTENT VALIDITY
WIECHSEL SEX ROLE PERCEPTION OF TASK SCALE
N=23

I. Sociometric Analysis

A. Did you notice that the names you could pick from to (a) take a short vacation trip, (b) work on a school committee and (c) like to have as a leader, were the names of all your classmates?

  Yes 22

B. Did you notice that there were both boys' and girls' names on the list?

  Yes 23

C. Did you understand that you could pick any of the people on the list that you would most want to be with or want to have as leader?

  Yes 23

II. Recorded Role Playing

A. Did you notice that both boys and girls took part in the recorded conversations?

  Yes 23

B. Did you understand that Gwen, Stan, Bill and Susan were talking about activities that most of us do? i.e., laundry, school work, going to parties, being on a team?

  Yes 23

C. Did you understand the questions after the conversations?

  Yes 22 Most of them 1

D. Did you understand that you could give your own opinion, that is, any answer which seems right to you?

  Yes 23
III. Role Cooperation--Pictorial

A. Did you notice that there were pictures of both boys and girls?
   Yes 23

B. Did you understand that you could pick a boy or a girl to do any of these tasks or activities?
   Yes 21

C. Did you remember to make your own choice, or give your own opinion of who could do these tasks?
   Yes 23

IV. Attitude Formation

Different Things To Do

A. Did you understand all the activities on the list of "Different Things To Do?"
   Yes 23

B. Did you understand how to mark your answer in the different columns?
   Yes 22

C. Did you understand that your answer is private and that there are no "right" or "wrong" answers?
   Yes 23

D. Did you give the answer that is closest to what you do and what you think?
   Yes 23

E. (This section was omitted in the re-test.)
   In completing the sentences, did you understand the words "all" which means every boy or girl and "many" which means most, but not all boys and girls?
   Yes 15
   No 8
Describing Words and Occupations

A. Did you understand that the describing words and occupations could apply to "Boys," "Girls" or "Both?"

Yes 23

B. Did you give your very own, honest opinion?

Yes 23

Cooperation

A. Did you understand that it is important for people to learn to work together?

Yes 23

B. Did you understand the questions and choices?

Yes 23

C. Did you pick the answer that most clearly tells what you think about working together?

Yes 23

V. Conclusion

A. Did you understand that these exercises showed boys and girls working and/or playing together?

Yes 22 No 1

B. Did you understand the words used?

Yes 21 No 2

C. Did you understand the way to mark your answers?

Yes 23

D. Did you have enough time?

Yes 21 No 2
E. Did you understand that both boys and girls can participate (do) in the same activities?

Yes 22  No 1

F. Did you understand that you did not need to pick the way things have been done in the past (traditionally), if it did not seem right to you?

Yes 23
APPENDIX E

COOPERSMITH SELF-ESTEEM INVENTORY
Please mark each statement in the following way:

If the statement describes how you usually feel, put a check ( ) in the column "LIKE ME."

If the statement does not describe how you usually feel, put a check ( ) in the column "UNLIKE ME."

There are no right or wrong answers?

<table>
<thead>
<tr>
<th></th>
<th>LIKE ME</th>
<th>UNLIKE ME</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I spend a lot of time daydreaming.</td>
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<td>2. I'm pretty sure of myself.</td>
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<td>3. I often wish I were someone else.</td>
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<td>4. I'm easy to like.</td>
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<td>5. My parents and I have a lot of fun together.</td>
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<td>6. I never worry about anything.</td>
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<td>7. I find it very hard to talk in front of the class.</td>
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<td>8. I wish I were younger.</td>
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<tr>
<td>9. There are lots of things about myself I'd change if I could.</td>
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<td>10. I can make up my mind without too much trouble.</td>
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<td>11. I'm a lot of fun to be with.</td>
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<td>12. I get upset easily at home.</td>
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<td>13. I always do the right thing.</td>
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<td>14. I'm proud of my school work.</td>
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<td>15. Someone always has to tell me what to do.</td>
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<tr>
<td>16. It takes me a long time to get used to anything new.</td>
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<tr>
<td></td>
<td>LIKE ME</td>
<td>UNLIKE ME</td>
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<td>17. I'm often sorry for the things I do.</td>
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<td>18. I'm popular with kids my own age.</td>
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<td>19. My parents usually consider my feelings.</td>
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<td>20. I'm never unhappy.</td>
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<td>21. I'm doing the best work that I can.</td>
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<td>22. I give in very easily.</td>
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<td>23. I can usually take care of myself.</td>
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<td>24. I'm pretty happy.</td>
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<td>25. I would rather play with children younger than me.</td>
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<td>26. My parents expect too much of me.</td>
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<td>27. I like everyone I know.</td>
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<td>28. I like to be called on in class.</td>
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<tr>
<td>29. I understand myself.</td>
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<td>30. It's pretty tough to be me.</td>
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<tr>
<td>31. Things are all mixed up in my life.</td>
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<td>32. Kids usually follow my ideas.</td>
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<td>33. No one pays much attention to me at home.</td>
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<td>34. I never get scolded.</td>
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<td>35. I'm not doing as well in school as I'd like to.</td>
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<td>36. I can make up my mind and stick to it.</td>
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<td>37. I really don't like being a boy-girl.</td>
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<td>38. I have a low opinion of myself.</td>
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<tr>
<td></td>
<td>LIKE ME</td>
<td>UNLIKE ME</td>
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<tr>
<td>39.</td>
<td>I don't like to be with other people.</td>
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<td>40.</td>
<td>There are many times when I'd like to leave home.</td>
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<tr>
<td>LIE</td>
<td>41. I'm never shy.</td>
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<td>42.</td>
<td>I often feel upset in school.</td>
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<tr>
<td>43.</td>
<td>I often feel ashamed of myself.</td>
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<td>44.</td>
<td>I'm not as nice looking as most people.</td>
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<td>45.</td>
<td>If I have something to say, I usually say it.</td>
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<td>46.</td>
<td>Kids pick on me very often.</td>
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<td>47.</td>
<td>My parents understand me.</td>
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<tr>
<td>LIE</td>
<td>48. I always tell the truth.</td>
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<td>49.</td>
<td>My teacher makes me feel I'm not good enough.</td>
<td></td>
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<tr>
<td>50.</td>
<td>I don't care what happens to me.</td>
<td></td>
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<tr>
<td>51.</td>
<td>I'm a failure.</td>
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<tr>
<td>52.</td>
<td>I get upset easily when I'm scolded.</td>
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<tr>
<td>53.</td>
<td>Most people are better liked than I am.</td>
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<tr>
<td>54.</td>
<td>I usually feel as if my parents are pushing me.</td>
<td></td>
</tr>
<tr>
<td>LIE</td>
<td>55. I always know what to say to people.</td>
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<tr>
<td>56.</td>
<td>I often get discouraged in school.</td>
<td></td>
</tr>
<tr>
<td>57.</td>
<td>Things usually don't bother me.</td>
<td></td>
</tr>
<tr>
<td>58.</td>
<td>I can't be depended on.</td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX F

SUGGESTED TASKS FOR STUDENTS IN

CAREER AWARENESS WORKSHOP
STRUCTURED TASKS FOR STUDENTS DURING CAREER AWARENESS WORKSHOPS

Introduction

Purpose and structure of group; number of meetings; time, location; formal/informal discussion method. Stress ability to question, dissent--trust and confidence in the group. Ability to choose.

1. List career aspirations, (a) individually, (b) as a group activity. Discuss within group. Responsibility of choice.

2. Make a list of men and women that you admire. Could be past or contemporary. What were their occupations? (Could be political, scholarly, in the arts, business, athletics, etc.) Discuss.

3. Discuss your favorite toys and books or games, as a small child and at present. What are your favorite recreational activities? What are your favorite or best school subjects? How could this effect your educational and (later) job choice?

4. How do people in different occupations spend a typical day? Analyze and break down tasks, transportation, interpersonal relations, goals of job. Role play.

5. List all the women you know (a) who are employed, (b) describe their jobs, (c) type and amount of training needed, (d) commitment to these occupations. Name some female athletes; what sports do they represent? Women in government, etc.

6. Discuss choice of women as homemaker. Care and responsibility of home and children. Recreational activities. Division of budget--salary.


8. Do you think that girls behave differently than boys? At school? At home? At play? Explain. Do you think that you feel, think and/or behave differently than boys? Why? How would this effect occupational choice?

9. Read list of activities--tasks to which students can respond--girls, boys, either or both.

10. Read list of occupations; ask students to substitute pronouns.
11. **Outside Assignment**—Bring in ads from media showing people at work. Who is doing what work? Do they illustrate a stereotypic (inflexible) point of view in regard to occupations and/or responsibility? Make a bulletin board. Discuss image of girls/women—myth and fact.

12. Use ten questions from Values Voting. Discuss differences, etc. Can be repeated during another group meeting.

13. **Outside Assignment**—Do some outside research (interview) to find level of education and career choice of six women (brief). Discuss in group. Describe occupations—time, place, transportation, salary, preparation, demand for service, etc.


15. Discuss decision making. Do girls—women make decisions? Do boys—men make decisions? What type of decisions? What decisions are most important?

16. Play "Twenty Questions." Ask group members to ask questions which would identify a job or job category. Use quiz show format with panel, teams, M.C., to guess characteristics of a job. (Also play "What's My Line.")

17. Bring in terms "assertiveness" and "aggressiveness." Relate this to passivity and compliance; popularity and being "nice." Relation to social-cultural-economic trends. Are all girls passive, compliant? How has the stereotypic perception hurt boys/men? Apply these comments to activities, education, occupations.

18. Discuss changing one's name. Reasons. Use of Ms. How do you feel?

19. Discuss. "To be masculine is..." "To be feminine is..." Traditional-realistic, i.e., pioneer women, war years, tasks involved in homemaking. Has it always been this way? Need for choice as effecting educational choice, job direction.

20. Examine newspaper ads. Which jobs are available for men and women? Why? Do occupations reflect tradition or new social trends?

21. Examine the Yellow Pages of the phone book for the above information, as well as jobs presently available in the community.
22. Discussion of ERA—Nationally and in Illinois. Ask students to interview an adult (could be a parent) and discuss views within the group. Interview both men and women in regard to legislation, present need, facts and fiction, personal opinion.

23. Imagine the ideally most satisfying, interesting career you can think of. Tell how it would make you feel to become this. Name the things you would need to do to put yourself a little closer to this career.

24. Each group member names one thing that she does (or did) that is not in the traditional boy-girl, male-female role and how it made her feel.

25. Summary of content. Processing--feedback. What have we done--what have we learned? Have girls complete poem—"What Are Little Girls Made Of...?"
VALUES VOTING

Vote, without discussion, as follows:

a. agree--raise hands
b. disagree--thumbs down
c. undecided--fold arms
d. pass--no action it is okay to pass)

How many of you think...

1. that girls can't be doctors and dentists?
2. that boys/men shouldn't cry?
3. that it is important for adults to know how to cook?
4. you will want to have a job outside of your home when you grow up?
5. it is not a father's job to take care of babies?
6. you would vote for a woman for president?
7. girls' games are less fun than boys' games?
8. a husband should share the housework?
9. a woman could become a good truck driver or electrician?
10. boys do better in math and science than girls?
11. that teachers should choose girls as often as boys to carry boxes, work with the projector, etc.?
12. that a husband would feel badly if his wife had a higher paying job than he does?
13. like to have "ladies go first?"
14. boys should be more adventurous than girls?
15. it is important to call women Miss or Mrs. so you can tell if they are married?
16. if there is a draft, women should be included?
17. men are more emotionally stable than women?
18. it's okay to share the expenses of a boy-girl date?
19. women should be more concerned with their looks than men?
20. think women's intuition is better than men's?
21. think males as a group are treated fairly on the job? Family?
22. think females as a group are treated fairly on the job? Family?
23. that rearing children should be done equally by both parents?
24. that schools should enroll equal numbers of men and women?
25. you would be as happy working for a woman as for a man?
26. women are more submissive, passive than men?
27. that day care centers should be provided for working mothers?
28. women should not compete with men on athletic teams or managerial-executive positions?
29. that men have better judgment than women?
30. that women can be geniuses too?
ACTIVITIES LIST

Who does these activities? Boys, girls or both?

visit museums
take out garbage
build a motor
sew and cut patterns
take pictures with camera
paint furniture and other things
rake leaves
babysit
use a hammer, wrench, tools
clean the house (room)
prepare food
plant a garden
repair the car
read the newspaper
wash clothes
set the table
make cookies
pick applies
feed/play with cat or dog
play card games
organize a (study) project
attend a movie, play, concert
play the record player
make presents
write a letter
build a desk
invite friends to visit
jump rope
deliver newspapers
race with bikes
wash the car
OCCUPATIONS LIST

Who does these? Women, men or both? Who can do them? Why? Why not?

plumber
pilot
dentist
sales clerk
pharmacist
reporter
florist
office workers
cook
senator
nurse
cleaning help
orchestra conductor
bus driver
business executive--owner
letter carrier
teacher
doctor
principal
musician
police work
architect
nursery teachers
lawyer
truck driver
engineer
clothing designer
jockey
investment broker
meteorologist (predicts weather)
deep sea diver
military personnel
homemaker
space scientist
APPENDIX G

TEACHER REPORT FORM
TEACHER'S REPORT

Student's Name: _______________________________________________________

Please check or rate the student above, to the best of your ability at this time. Spontaneous responses and general perceptions of the child's behavior, attitudes and achievement are requested; it is not necessary to check grade books or past records to complete this report. This is a short report -- your first answer is most desirable. Thank you.

1. In your opinion, this student's achievement could be evaluated as follows: (Please check)

<table>
<thead>
<tr>
<th>Activity</th>
<th>Above Average</th>
<th>Average</th>
<th>Below Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading (language arts)</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Math (number concepts and mixed operations)</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Science (interests, concepts, techniques)</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

2. Has this child expressed an interest in any of the following activities? (Circle appropriate activities)

- Volleyball
- Swimming
- Chess
- Fishing
- Skiing
- Soccer
- Reading
- Hockey
- Camping
- Gymnastics
- Music
- Mechanics
- Tennis
- Bicycling
- Arts
- Baseball
- Football
- Cooking

3. Has this child demonstrated an interest in any of the following activities? (Circle appropriate activities)

- Volleyball
- Swimming
- Chess
- Fishing
- Skiing
- Soccer
- Reading
- Hockey
- Camping
- Gymnastics
- Music
- Mechanics
- Tennis
- Bicycling
- Arts
- Baseball
- Football
- Cooking

4. Does this child express opinions freely and directly (in class) even when they may conflict with those of the group? (Circle answer)

- Always
- Usually
- Rarely
- Never
5. Does this child participate verbally in group discussions of class assignments?
   Always    Usually    Rarely    Never

6. Does this student demonstrate withdrawing (avoidance) behavior?
   Always    Usually    Rarely    Never

7. Does this student demonstrate aggressive (hostile, angry) behavior?
   Always    Usually    Rarely    Never

8. Is there confidence and assurance in relationships with teachers and classmates (not shy)?
   Always    Usually    Rarely    Never

9. Does this child adapt easily to new situations (feel confident in new settings, enter easily into new activities)?
   Always    Usually    Rarely    Never

10. Is this child easily upset by failure or stress?
    Always    Usually    Rarely    Never

11. Is this student chosen for activities by classmates?
    Always    Usually    Rarely    Never

12. Is this child chosen for leadership by classmates?
    Always    Usually    Rarely    Never

Additional comments: ____________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

Teacher's Name
APPENDIX H

CONSENT LETTER TO PARENTS PRIOR TO STUDY

AND PARENT REPORT
September, 1975

Dear Parent:

The fifth grade girls at ___________________ School have been invited to participate in a new program, which would enable them to explore the world of educational-occupational-career choices.

Some of the youngsters will be involved in weekly activities in supervised study groups and all of the girls will participate in the final assessment activity. Work with the students will be completed by Thanksgiving; results and recommendations applicable to our curriculum planning will be available to the district and parents in Spring 1976, before the end of the school year. ___________________ School is one of several participating in this pilot program, which has been approved by the Superintendent.

At some time during the course of the program, you will be asked to complete a parent survey. Please be assured that your child will not be individually identified in any way. If you wish more information about our program, you may call Ms. Jane M. Podall, Career Project Coordinator, at 446-8594 or 677-7660.

Because this is a new program, it is desirable that you sign the consent form below, which will permit your fifth grader to participate in the program. If you prefer that your child not participate, please inform Mr. ___________________ by September __, 1975.

Thank you for your interest and cooperation in advance; you may be assured of our enthusiasm for this project.

Sincerely,

Principal

---

Dear Mr. ___________________:

I would like my daughter ___________________ to participate in the occupational-career awareness program scheduled for fifth grade this term.

Yes _____

No _____

Parent Signature
PARENT REPORT

Child's Name: ____________________________ Age: ______

Child's Birthplace: ____________________________

Siblings:   Older sisters ______ Younger sisters ______
             Older brothers ______ Younger brothers ______

Parents' Educational Experience:

   Mother--last grade completed: ______
   Father--last grade completed: ______

If college or special training (business, arts, technical, etc.)

   Mother's major subject: ____________________________
   Father's major subject: ____________________________

Parents' Occupations: (Circle best answer--full or part-time)

   Mother: ____________________________
   Father: ____________________________

What do you want your daughter to be when she grows up?

__________________________________________________________

Any particular educational plans for her? ______________________

__________________________________________________________

Do both parents agree about her future? Yes   No
Circle one.

Mother's Employment History: (Circle the answer which applies to you)

   Employed before marriage
   Employed after marriage, but before birth of children
   Employed after children, but not at present
   Presently employed
   If other pattern, please explain: ____________________________

If mother is employed at present, length (or dates) of employment:

__________________________________________________________
Father's attitude toward mother's employment: (Circle best answer)

Encourages Approves Accepts Neutral Disapproves

If one parent family, please indicate: ____________________________

Do you feel that your daughter works up to her ability in school? ______ Above Average Average Below Average

Best subjects: __________________________________________________

Weakest subject areas: __________________________________________

In your opinion, how does your daughter relate to friends? (Circle best answer)

Confident and self-reliant.......Dependent
Serious..............................Silly
Shares...............................Wants things own way
Likes people......................Tends to avoid others
APPENDIX I

SELECTION APPLICATION AND WEEKLY RECORD SHEET

FOR GROUP LEADERS
BACKGROUND DATA
To be Completed by Group Leaders

Name: ________________________________
Address: ________________________________
Telephone: __________________
Age: ______
Educational Level Attained: ________________________________
Present Program: ________________________________
Present Employment: ________________________________

Have you had experience as a member of a therapy or training group?
Where: ________________________________
When: ________________________________
Explain: ________________________________

Have you had experience directing groups or as group leader?
Type of Group: ________________________________
Where: ________________________________
When: ________________________________
Explain: ________________________________

Have you ever worked with children?
Age of Children: ________________________________
In What Setting: ________________________________

Are you at ease with elementary school children? ______

Do you believe there are or know of inequities in the areas of educational, vocational and social opportunities for women? ________________________________
Have you ever been aware of differences in early socialization and training for boys and girls? __________

If "Yes," have you ever discussed this with others? ____

Who? ____________________________________________

What are your educational/vocational goals?
________________________________________________
________________________________________________

What is the ERA? ____________________________________

Briefly, give some background information about the ERA and your personal feelings about it.
________________________________________________
________________________________________________
________________________________________________

Are you interested in working with elementary school children as a group leader of a small task-oriented group? __________

Will you be able to schedule work with small groups (7-10) of elementary school girls for one hour per week, for eight weeks, during the fall semester? Groups will meet during the school day and in the public school setting. __________

Do you have a car? ________

Additional comments or questions:

PLEASE RETURN THE COMPLETED QUESTIONNAIRE IN THE SELF-STAMPED, ADDRESSED ENVELOPE

Thank you.

Jane M. Podall
1739 Colonial Lane
Northfield, Illinois 60093
446-8594
RECORD SHEET FOR GROUP LEADER

Leader: ____________________ Career Awareness Workshop: #

School: ____________________ Class Teacher & Home Room: _____

Members in attendance:

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14.

Topics introduced: ________________________________

Subjects discussed: ________________________________

Most active participants: ____________________________

Leaders: ________________________________

Least active participants: __________________________

Withdrawn: ________________________________

Attitudes and climate: (Circle most appropriate for group)

Accepting--Rejecting  Friendly--Hostile
Open--Silent  Enthusiastic--Bored
Knowledgeable--Uninformed  Cognitive--Emotional

Outside assignment: ________________________________

Continuing topics for next meeting: ________________________________

Personal feelings and/or additional comments about this meeting:
The dissertation submitted by Jane M. Podall has been read and approved by the following committee:

Dr. John A. Wellington, Director
Professor, Guidance and Counseling
Loyola University

Dr. Jeanne M. Foley
Professor of Psychology and
Dean of Social Sciences
Loyola University

Dr. Jack Kavanagh
Assistant Professor and
Chairman of Educational Foundations
Loyola University

Dr. Judith A. Lewis
Director of Inner College
University of San Francisco

Dr. Manuel S. Silverman
Associate Professor and
Chairman of Guidance and Counseling
Loyola University

The final copies have been examined by the director of the dissertation and the signature which appears below verifies the fact that any necessary changes have been incorporated and that the dissertation is now given final approval by the committee with reference to content and form.

The dissertation is therefore accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

Date: 4 May 1977

Director's Signature: John A. Wellington