

ATTITUDES OF CANADIAN EDUCATORS TOWARD  
THE CHANGING WORK PATTERNS OF WOMEN

CENTRE FOR NEWFOUNDLAND STUDIES

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ATTITUDES OF CANADIAN EDUCATORS TOWARD THE  
CHANGING WORK PATTERNS OF WOMEN

by

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## **Abstract**

Investigation of educators' sex-role attitudes is of particular importance in determining the influence they may have on female students' career choices. The purpose of this study was to assess the attitudes of educators toward career-related aspects of women's changing role in society. Comparisons of subgroups were made on the basis of four independent variables: sex, age, marital status, and location.

A questionnaire was developed to measure educators' attitudes toward the changing work patterns of women. It consisted of four subscales: Sexual Equality, Dual Role, Nontraditional and Information/Knowledge. The sample consisted of 287 educators from the Avalon Consolidated Integrated and Terra Nova-Cape Freels Integrated school boards in the province of Newfoundland and Labrador.

A significant difference on the basis of sex was found in all of the subscales as well as the total questionnaire. Females had more egalitarian attitudes than males and were more aware of the financial inequities that many women face in our society. There was a significant difference on the basis of age in the Dual Role and Nontraditional subscales as well as the total scale. Younger respondents (20-29 years) and those aged 30-39 were more egalitarian than older respondents (40 and over). A significant difference based

on location was found in the Sexual Equality and Information/Knowledge subscales. Respondents in the urban area were more egalitarian than those in the rural areas and were more aware of the financial inequities that many women face in our society. There was a significant interaction effect between sex and location in the Dual Role and Nontraditional subscales. Urban females were more egalitarian than rural females. There were no significant differences based on marital status.

Recommendations were made in the areas of future research and intervention strategies.

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## CHAPTER I

### Introduction to the Study

#### Purpose of the Study

The purpose of this study was to assess the attitudes of educators toward various career-related aspects of the changing role of women in society. An instrument was developed to measure the degree of acceptance or rejection of the effects of these changes.

The emphasis was on factors associated with females' increased participation in the work force and their gradual movement into occupational areas traditionally held by males.

#### Rationale

"One of the most significant social trends in Canada over the past several decades has been the dramatic increase in the labour force participation of women" (Marshall, 1987, p. 7). Between 1975 and 1985, the female labour force increased by 46.3%, in contrast to a 15.3% growth for males (Labour Canada, 1987). A more detailed examination of the participation of women in the labour force, however, reveals disturbing inequities. Women still tend to be concentrated in traditionally female jobs which are generally low-paid and offer little opportunity for advancement. Research conducted by the Women's Bureau of Labour Canada (1987)

showed that 59% of all working women in Canada were concentrated in clerical, sales and service occupations while only 8.3% were classified in managerial and administrative occupations. Canadian women employed full-time earned only 64.9% of the average earnings of men. There were no occupational categories in which the average earnings of women exceeded those of men and the average income of females was substantially less than that of males at all educational levels.

The Newfoundland Royal Commission on Employment and Unemployment (1986) found that the vast majority of employed women in the province of Newfoundland were in low-wage positions and that females are continuing to train for low-salaried positions rather than for the higher-paid, nontraditional occupations. The members of the commission decried the lack of research conducted on female employment in Newfoundland. In a review of available literature, however, they concluded that sex-stereotyping appears to have a considerable impact on the career choices made by young women in secondary and post-secondary institutions. In addition, teachers are often unaware that they sometimes treat females in a manner that helps to form misperceptions about their capabilities. The Royal Commission stressed that females "need to be given equal opportunity in occupations that have traditionally been male dominated; the educational system needs to be changed to remove all

vestiges of sex-stereotyping" (p. 254). In addition, the Commission members noted that female students in Newfoundland often make curriculum choices in high school which limit their future employment options.

In Who Turns The Wheel, the Science Council of Canada (1981) reported that the impact of science and technology is becoming increasingly significant in our society. Women must be prepared for the changes in the workplace created by technological innovation. Girls who do not acquire mathematical and scientific skills will be ineligible for admission to science and technology programs in post-secondary institutions. They will be unable to take advantage of increased opportunities developing in these areas. If females are not encouraged by school personnel to acquire skills in the mathematical and scientific areas, their success in future career endeavors will be jeopardized.

A Labour Canada Task Force on Micro-Electronics and Employment (1982) stressed that two-thirds of women workers in Canada are concentrated in positions which are prime targets for efficiency and productivity improvements through the introduction of microelectronic technology. In a 1985 report to Employment and Immigration Canada (EIC), the Women's Employment Directorate stressed that the job sectors in which the majority of women continue to be employed are being eroded by office automation. There is an urgency in

EIC's efforts to promote nontraditional employment for women. Another factor that will influence females' career choices in the future is the fact that "traditional women's occupations are now precisely those that are most in oversupply" (Herr & Cramer, 1988, p. 156). The authors stated that women will likely be forced by the realities of the labour market to broaden their choices of occupations.

One major consequence of occupational segregation is obviously the lower financial rewards and lack of opportunity for advancement that are inherent in most traditional jobs for females (Employment and Immigration Canada, 1985). Efforts are being made to change this situation through calls for pay equity legislation and encouragement of females to consider nontraditional employment. Change is taking place, however, at a very slow rate. Educators are obligated to study the continuing trend of occupational segregation. It is their responsibility to develop fully the potential of every student. The future of half of our young people is greatly affected by our understanding of and influence upon the career choices of female students.

Boak and Boak (1989) attempted to provide insights into the career knowledge and interests of female high school students in Newfoundland. They found that parents and teachers were most often cited by the students as important sources of influence on their career interests. Houser and

Garvey (1985) found that the one dimension that most significantly differentiated women who entered nontraditional vocational programs from those who entered traditional programs was the amount of support and encouragement they received from the significant others in their lives. Nontraditionals, or pioneers, consistently received more support from female and male friends, family members, teachers and counsellors. In an earlier study, Houser and Garvey (1983) found that the amount of support a student expects from the significant others in her life clearly differentiates those who enroll in a nontraditional program from those who do not. Stringer and Duncan (1985) compared women entering traditional (nursing and medical rehabilitation) and nontraditional (medical and dental) careers. They found that females entering nontraditional fields were more likely to perceive the attitudes of significant others as favorable toward nontraditional careers. The above studies suggest that the attitudes of significant others may exert a strong influence on a female's career choice.

Most of the background or external factors which have been investigated as possible influences on females' career choices (socioeconomic status, educational/career level of parents, support of parents) are not generally under the control of school personnel. The attitudes and level of awareness of teachers, administrators and counsellors in

relation to females' educational and career plans can have either an inhibiting or enhancing effect. At least these factors are more amenable to change within the school system (Heins, Hendricks & Martindale, 1982).

Concerns about the lack of research on attitudes of Canadians toward women's roles and issues (Women's Bureau of Labour Canada, 1984) and the possible negative effects of teachers' attitudes on female students' career aspirations (Newfoundland Royal Commission on Employment and Unemployment, 1986; Fox and Richmond, 1979) underline the importance of clarifying the particular nature of attitudes of school personnel toward career-related aspects of women's changing role in society. As Boak and Boak (1989) stated, future studies are required "to gain insight into whether ... teachers have differential educational and career expectations for young people based on gender and how their expectations are manifested" (p. 53).

### Significance

Because of the dramatic increase in female participation in the workforce over the last two decades and the particular problems associated with occupational segregation, researchers have developed an interest in the "unique career development needs of females" (Herr & Cramer, 1988, p. 154). The issues associated with females' increasing participation in an occupationally segregated

labour market, however, have profound implications in society at large. Any focus on the particular career needs of females must be perceived in the broader social context of the effects of changes on the family and the workplace. Increased participation of women in the paid workforce has created the need for females and males to cope with additional family pressures. These challenges are associated with such issues as sexual division of labour in the home and the shortage of adequate daycare facilities. The changing composition of the labour force and the increase in the number of women entering nontraditional careers create a dynamic situation in the workplace, as both females and males adjust to working together. The financial advantages for the family of higher paying jobs for females will have to be balanced against the broader economic problems that may result from increased competition for high-technology occupations. An examination of issues related to the dynamics of women's changing role and the challenges that changes create indicate that the unique career development needs of females must be viewed in a much broader social context. In short, women's issues are social issues that affect all members of society in one way or another.

The Women's Bureau of Labour Canada (1984) stated that comparatively little is known about the attitudes and opinions held by Canadians on women's roles and issues.



This study focused on exploring the attitudes of teachers, administrators and counsellors in the school system toward various aspects of females' educational and career decisions and their awareness of the realities of women's world of work. The nature of these attitudes (on a continuum from traditional to egalitarian) would shed some light on the particular kind of influence that they may be exerting on female students. Meaningful social change will require an accompanying change in underlying attitudes and perceptions of women's roles. This is a necessary requirement for far-reaching behavioral changes leading to gender role equity. Interventions designed to broaden girls' perceptions of available careers would likely have limited effectiveness if members of teaching staffs harbour negative attitudes towards a more egalitarian approach or have misperceptions about women's role in the world of work.

Assessing the attitudes and level of awareness of the teaching staff in the school environment in relation to females' career paths would provide a context in which interventions may be developed. Particular interventions designed for females in the school may be more beneficial if they were supplemented by programs developed to change the attitudes and knowledge of the people who exert an influence on them. As Haring and Beyard-Tyler (1984) emphasized, the result will hopefully be young women who are more capable of seriously considering financially rewarding and challenging

occupations that are presently nontraditional for their gender. Developing the full potential of female students can only improve their quality of life. Educators can play a vital role in helping to remove the barriers to females' full and equal participation in the world of work.

### Definition of Terms

For the purposes of this study, the following definitions will be used:

**Attitude** refers to "a manner of acting, feeling, or thinking that shows one's disposition, opinion, etc." (Guralnik, 1982, p. 90). It encompasses the behavior, feelings or thoughts of a person toward a situation, cause or other people. In this study, the focus is on how educators feel about the changing role of women in society.

**Conservative** refers to the tendency "to preserve established traditions or institutions and to resist or oppose any changes in these" (Guralnik, 1982, p. 302). A conservative person would be inclined to keep things as they are or were in the past. In terms of the changing role of women in society, he/she would be opposed to major changes in that role which would deviate significantly from the traditional one of homemaker.

**Contemporary** refers to "the present or recent times; modern" (Guralnik, 1982, p. 306). People who have contemporary attitudes towards the changing role of women in

society have generally tolerant views of the changes that have taken place in that role up to the present time.

**Dual role** refers to the two major roles a person undertakes when dealing with the responsibilities of both home and the workplace.

**Egalitarian** refers to a model of sex role behavior which stresses that men and women are equals in the home and the workplace. While "childbearing remains the biological function of females, child-raising, household tasks and labour force participation are not only permissible for either sex, but, ideally, are equally shared" (Labour Canada, 1984, p. 3). It is based on the attitude that men and women should have access to identical positions and rewards.

**Liberal** refers to the tendency to be tolerant "of others' views as well as open-mindedness to ideas that challenge tradition or established institutions" (Guralnik, 1982, p. 814). In this study, a liberal person would be inclined to favour progress or reform in the role of women in society.

**Nontraditional employment** for females refers to occupational categories in which there are less than 30% women.

**Occupational segregation** refers to a situation in the workforce that results when different groups, such as females and males, tend to enter different occupational areas.

**Perception** refers to "a specific idea, concept, impression" formed through one's understanding or comprehension; insight; awareness (Gurálik, 1982, p. 1054). In this study, the focus is on the perceptions or ideas that educators have about the changing role of women in society.

**Rural** refers to communities with a population of less than 5000. In this study, the rural areas were located in the Terra Nova-Cape Freels Integrated school board.

**School personnel** refers to the professional staff at the school level in the educational system and includes teachers, administrators and guidance counsellors.

**Sex-role egalitarianism** was defined by Beere, King, Beere and King (1984) as "an attitude that causes one to respond to another individual independently of the other's sex" (p. 564). A person with an egalitarian attitude believes that the sex of an individual should not influence the perception of his/her abilities, rights, obligations and opportunities.

**Sexual equality** incorporates the ideal of equality of females and males in terms of economic equality as well as equality of opportunity, rights and privileges.

**Sex role** refers to the expectations of behavior as a function of one's gender.

**Stereotype** is a "fixed or conventional notion or conception, as of a person, group, idea, etc. held by a number of people and allowing for no individuality, critical

judgment, etc." (Guralnik, 1982, p. 1397). A stereotypical view of women and their role in society would be relatively inflexible and narrow. It would not include an awareness or tolerance of a great deal of variety in behaviors of females.

**Traditional** means conforming to tradition, "a long established custom or practice" (Guralnik, 1982, p. 1507). In terms of sex roles, it refers to a model of sex role behavior in which it is argued that women "ordinarily belong in the home and function primarily as childbearers, child raisers, and homemakers, whereas men are the participants in the economic sector" (Labour Canada, 1984, p. 3).

**Urban** refers to communities with a population of 5000 or more. In this study, the urban area was the city of St. John's.

### Research Questions

An attitude questionnaire was developed to assess attitudes of teachers toward the changing work patterns of women. The questionnaire consisted of four subscales: Sexual Equality, Dual Role, Nontraditional and Information/Knowledge. Scores on the four subscales and the total score were broken down according to the variables of sex, age, marital status and location. The following research questions were examined:

1. What are the mean scores for each of the four

subscales (Sexual Equality, Dual Role, Nontraditional, Information/Knowledge)?

2. In the Sexual Equality subscale (S), were there any significant differences between the mean scores of the respondents based on the variables of age, sex, marital status or location?

3. In the Dual Role subscale (D), were there any significant differences between the mean scores of the respondents based on the variables of age, sex, marital status or location?

4. In the Nontraditional subscale (N), were there any significant differences between the mean scores of the respondents based on the variables of age, sex, marital status or location?

5. In the Information/Knowledge subscale (I), were there any significant differences between the mean scores of the respondents based on the variables of age, sex, marital status or location?

6. What were the ten highest-ranked items in the entire questionnaire?

7. What were the ten lowest-ranked items in the entire questionnaire?

8. Were there any significant differences between the mean scores on the entire questionnaire based on the variables of age, sex, marital status or location?

## CHAPTER II

### Review of Related Literature

#### Introduction

A great deal of research into the career development of women has concentrated on delineating factors which influence their choices of careers. The purpose of many studies has been to determine specific personality traits and background factors which may help to identify and predict women's vocational choices (Chusmir, 1983). Females' career choices in general are influenced by so many variables, both external and internal, that clear, simple explanations do not exist for the differences between female and male career paths. Clement (1987) noted the complex nature of the study of females' career choices by stressing that future research may have to take a broader approach which encompasses both psychological and situational variables. A comprehensive review of research related to females' career aspirations, expectations and choices reveals that results are often conflicting (Herr & Cramer, 1988, p. 159). The particular combination and relative importance of factors which influence women have not been clearly delineated.

Although the concentration of females in low-paid, traditional occupations is a complex social issue, sexual stereotyping is a common thread which runs through all of

the studies. Herr and Cramer (1988) stressed that sex stereotyping of occupations still restricts the career development of females (and males). Too many people continue to view the sexes in a stereotypical fashion and feel that women and men should enact different domestic and occupational roles.

### Models of Career Choice

Gottfredson (1981) developed a theory of the development of occupational aspirations from preschool through the college years. The theory uses self-concept as an integral, fundamental principle in vocational development. Gottfredson stated that "social class, intelligence, and sex are seen as important determinants of both self-concept and the types of compromises people must make, thus the theory integrates a social systems perspective with the more psychological approaches" (p. 546). A progressive and permanent circumscription of occupational preferences takes place according to a child's developing self-concept.

Early individual judgments of compatibility of job and self emerge as self-images and preferences conditioned by cognitive development and social environment. Between the ages of 6-8, children reject occupations that are perceived as inappropriate for one's sex. At a later stage, occupations of unacceptably low prestige are ruled out



because they are inconsistent with social class self-concept. During adolescence young people narrow their choices further by judging occupations on the basis of personal interests, abilities and values.

At the end of high school, students must adjust to the reality of job market forces as well as life and family plans and the principles of compromise come into play. Vocational interests or field of work would be most readily sacrificed followed by prestige level of the job. Sextype of job would be compromised last as gender self-concept would be the most strongly protected aspect of self.

Hesketh, Elmslie and Kaldor (1990) offered an alternative account of compromise which involved a modification of Gottfredson's theory (1981). It challenged "the assumption that factors incorporated earlier into the self-concept, such as gender conceptions, are the most important to a person who is making a career decision" (p. 50). The researchers thought that sextype, prestige level and interests were not independent of each other but that each psychological structure was integrated into the self-concept in a cumulative manner. They consequently concluded that interests would be the most important aspect of self-concept.

Two studies were conducted, one with a sample of high school students and the other with a sample in which the ages ranged from 15 to 53 years. The results of both

studies indicated that interests were considered significantly more important than sex type. Hesketh, Elmslie and Kaldor concluded that the alternative theory of compromise was supported by the data. In addition, they questioned the deterministic assumption of Gottfredson that once an occupation had been rejected on the basis of being sex inappropriate, this decision was unlikely to be considered. They speculated that people may reconsider this rejection on the basis of interest value which the researchers viewed as the most important aspect of self-concept in terms of career compromise.

Astin (1984) developed a need-based developmental model of occupational choice which also incorporated both psychological and social/environmental variables. The model was intended to explain gender differences in career choice and recent changes in the career aspirations and occupational behavior of females. Assuming that men and women work for the same reasons, she attempted to identify mediating variables that translate work motivations (survival, pleasure and contribution) into different work expectations and career outcomes. Males and females, however, differ in their work expectations or perceptions of what types of work are available, accessible and can best satisfy their needs. Work expectations are developed through socialization, whereby society's values are internalized throughout childhood under the influence of

parents, teachers and other adults.

Structure of opportunity, a concept that depicts how social forces shape and reshape occupational decisions, interacts with the socialization process. Social change has led to changes in the structure of opportunity and modifications in the work expectations of women. According to Astin, barriers to employment have been reduced and career options have increased for females.

Astin's model has been praised for contributing "significantly to the theoretical base of career development of women" (Nevill, 1984, p. 131) and for providing "a conceptual framework for understanding changes across time" (Bernard, 1984, p. 139). Criticisms, however, have been made about the lack of operational definitions (Harmon, 1984) and whether the model sufficiently addresses the realities of the career development of women (Gilbert, 1984). In addition, Fitzgerald and Betz (1984) stated that "the model lacks integration with available knowledge in the field, the constructs are poorly defined and no suggestions for measurement are given" (p. 136).

Farmer (1985) developed a multidimensional model to explain the career and achievement motivation of men and women. Three sets of influences (Background, Personal and Environmental) on three motivation dimensions (aspiration, mastery and career commitment) formed the framework of the model which Farmer evaluated with a sample of 1863 ninth and

twelfth grade students. The results indicated that all three sets of influences related significantly with each of the motivation dimensions.

For the aspiration dimension, parent and teacher support were significant influences, as well as support for women working. Age was a mediating factor in parent and teacher support. Parental support was a more important influence on aspiration for the ninth grade students and teacher support was more important for the twelfth grade students. For mastery, males scored higher and the results were enhanced by independent and competitive variables. In contrast, mastery for females was enhanced by mathematics ability, intrinsic values, teacher support and support for women working. The career dimension was influenced more by Personal factors than Background and Environment factors combined. Farmer stated "the mediating effect of parent and teacher support on personal variables suggests that changing socialization experiences at home and in school will affect a person's career commitment during the school years" (p. 385). In addition, homemaking was the most significant personal variable for females indicating that low homemaking commitment is related to high career commitment. Farmer found that high homemaking commitment had a negative effect on long-range career motivation for females but not for males. She suggested that, since both aspiration and mastery were influenced by perceived support for women

working and parent and teacher support, changes in these factors may affect male and female achievement in the future.

In a later review of her model and related research, Farmer (1987) reaffirmed that males and females differ in the pattern and types of factors influencing their motivation. In essence, "the effect of parent and teacher support on motivation is stronger for women than for men" (p. 5).

All three of the above models incorporate both psychological or personal self-concept factors as well as a social/environmental perspective. Gottfredson (1981) believed that jobs incompatible with gender self-concept are rejected at a young age and this decision is usually permanent and reversed only under extreme circumstances. Farmer (1985) and Astin (1984) appear to have developed more optimistic approaches than Gottfredson in terms of females entering nontraditional occupations. Their models provide more hope that changing social trends may serve to encourage females to more readily consider sex atypical occupations in the future. Farmer in particular stressed that parent and teacher support may be key factors in the career development of women and changes in these factors may have a significant influence on females' career motivation.

### Significant Others in General

The study of the influence of others on females' career choices has usually been concentrated on three main groups: family (especially parents), peers and school personnel. The support of these significant others, especially that of parents, in terms of females' decisions to enter nontraditional occupations has been of particular interest to researchers. Encouragement or discouragement from people whose opinions and attitudes are viewed as important may influence females a great deal, especially in terms of considering sex atypical occupations.

Women were more likely to be interested in high-prestige, male-dominated occupations if they perceived that this career choice would elicit a degree of approval from others (Bridges and Bower, 1985). Women entering nontraditional (medical and dental) careers perceived most significant others (parents and male friends) as more favorably oriented toward such a career choice than did the respondents in more traditional (nursing and medical rehabilitation) fields of study (Trigg and Perlman, 1976). Students in nontraditional vocational programs consistently indicated that their families, friends and school acquaintances were supportive and encouraging of their decision to enroll in a male-dominated program. The degree of support was significantly higher than the students in traditional programs would have expected if they had chosen

a similar atypical career path (Houser & Garvey, 1983).

The results of a study of 87 female physicians (Heins et al., 1982) showed that they regarded family influence and encouragement from others as important motivations toward their careers. They were compared to a sample of 87 female neighbours who lived on the same streets. Comparisons were made on the basis of encouragement from others to pursue their careers. The "others" included parents and husbands, as well as non-family members (friends and high school or college teachers). The female physicians reported more support than did their female neighbours with and without specified career goals. Although both groups reported similar levels of family support, the physicians reported higher levels of support from people outside the family (friends and teachers). The authors stated that extra-family support provides a framework on which to base improvements and innovations in career counselling for women. Parental socioeconomic status and supports are usually fixed but the community, especially the schools, can provide external supports.

Houser and Garvey (1985) administered questionnaires to female students enrolled in vocational training programs in secondary schools, regional occupational centers and community colleges. They concluded that the amount of discouragement a female student receives from her peers and teachers/counsellors is related to whether she decides to

actually enroll in a nontraditional course. The amount of influence exerted by educational personnel on female students' vocational decisions may be very considerable. The above studies support the idea that significant others inside and outside the family have an influence on females' decisions to enter nontraditional occupations.

Hawley (1971) suggested that support from males in particular may have a special influence on females' career decisions. Homemakers and those in traditional occupations tended to believe that males had stereotypical views of what was appropriate female behavior. Females in nontraditional occupations did not tend to evaluate the attitudes of the significant males in their lives as stereotypical. Hawley concluded that the careers women choose and their perceptions of men's views of the feminine ideal are related. Women may be influenced by what they believe men think is appropriate female behavior. In a later study, Hawley (1972) found additional support for the hypothesis that women choose careers which are consistent with their own judgement of the model of femininity held by the significant men in their lives. Nontraditionals (college mathematics/science majors) indicated that the important men in their lives felt that a woman could have a career without it jeopardizing her marriage, family or femininity. On the other hand, the traditional students (teaching majors) thought men felt that only certain roles were appropriate



for women.

The special influence of males can also extend to teachers as well as parents or spouses. Female senior high school students in Newfoundland cited parents and teachers as the most important influences on their career interests (Boak & Boak, 1989). Both female and male teachers were listed as major influences on their career interests but male teachers were indicated more often. School guidance counsellors were cited less often but the authors attributed this to the fact that students in many rural communities had "little, if any, opportunity to meet with a counsellor" (p. 43).

Lemkau (1983) also suggested that males may have a special influence on the career decisions of females. She studied women (50 years old and under) who had master's degrees and worked in their fields for at least 20 hours a week. Seventy-one women were in traditional professions (over 75% female participation), one of which was elementary teaching. Sixty-four were in atypical professions (more than 75% male participation). She found that women in traditional professions were more likely to report the positive influence of other women on their career choices, particularly persons outside the immediate family (nonparental relatives and teachers). Women in atypical professions more frequently mentioned the positive influence of men--their fathers, boyfriends, husbands and male

teachers. Males appear to be an important source of encouragement to females considering nontraditional careers. Lemkau concluded that males' views of women and the model of femininity that they consciously or unconsciously impart to females may help shape attitudes affecting important career decisions.

Support from the significant others in their lives appears to be an important influence in females' career choices, especially in terms of decisions to enter nontraditional occupations. The results of these studies indicate that the attitudes of significant males in women's lives may be of primary importance. Females who entered nontraditional occupations often cited the acceptance and encouragement by males as an influential factor.

### **Students' Attitudes and Perceptions**

In assessing the influence of significant others on students' attitudes, it is important to examine research which may shed light on the perceptions of young people which may be inhibiting to the development of females' career aspirations. A female student who perceives a lack of support for nontraditional career goals, especially from her peers, may be influenced to choose a more sex typical occupation. The need for analyzing the attitudes of educators toward women's career roles is based on the premise that they have an influence on students' attitudes

toward themselves and others.

Many studies have investigated the occupational sex-role stereotypes of school children (Benson & Vincent, 1980; Frost & Diamond, 1979; Hughes et al., 1985; Janman, 1989; Lifschitz, 1983; Mason & Kahle, 1988; O'Keefe & Hyde, 1983; Robison-Awana, Kehle & Jenson, 1986; Teglas, 1981; Umstot, 1980; Weeks & Porter, 1983) and college students (Bayer, 1975; Beere et al., 1984; Etaugh & Riley, 1983; Etaugh & Spandikow, 1981; Etaugh & Spiller, 1989; Etaugh & Study, 1989; Helmreich, Spence & Gibson, 1982; Strange & Rea, 1983; Tipton, 1976). In a review of literature, Weeks and Porter (1983) stated that sex-role stereotypes obviously exist in American children's attitudes but the sources of those beliefs and ways to prevent or change them are not clear.

In an effort to examine Canadian children's perceptions about the world of work, Labour Canada (1986) commissioned a study of the career aspirations and expectations of students. The findings of the report confirmed the pervasiveness of sex-role stereotyping in Canadian society. Gender was the most significant variable in determining children's career expectations. Equally disturbing were the unrealistic perceptions about future employment. Girls were preoccupied with marriage and motherhood and assumed that a husband would provide for the family. They did not seem to consider the possibility of having to work to support themselves and their children.

In a study sponsored by the Secretary of State (1986), researchers set out to assess perceptions of vocational opportunities held by adolescent females in Newfoundland and to discover beliefs and misperceptions they might have about their abilities and limitations. The results were similar to those of the previous study (Labour Canada, 1986) in that young females' perceptions about their future roles in the world of work were unrealistic. They seemed unprepared to deal with the implications of economic realities in the adult world.

The purpose of the study of Karnes and D'Ilio (1989) was to investigate sex role stereotyping of leadership roles by intellectually gifted students. The sample consisted of 49 boys and 48 girls in grades four through six. When presented with a list of 34 leadership positions, the students indicated whether men, women or either sex could hold that position. The results suggested that the boys had more traditional sex role stereotypes than the girls. In contrast, the female students perceived most of the leadership positions as suitable for either sex.

Haring and Beyard-Tyler (1984) studied the attitudes of 138 seventh-graders toward nontraditional occupations for women and the females who enter them. The authors stated that one barrier to females exploring and selecting nontraditional occupations has been the attitudes of the student population toward those occupations and, perhaps

more importantly, toward the people who choose them. Young people not only had negative attitudes toward people in nontraditional occupations but were likely to hide those attitudes. They suggested that school counsellors must deal not only with restricted choices of females, but also with peer pressure against broadening their options to include nontraditional occupations.

Pfost and Fiore (1990) tested the hypothesis that "interpersonal consequences of deviation from culturally prescribed sex roles restrict women's achievement in traditionally masculine fields" (p. 16). They assessed the attitudes of 165 female and 130 male college undergraduates toward students who were described as having made various occupational choices and having different levels of academic performance. Women described as pursuing masculine occupations, regardless of academic performance, were rated by men as least desirable romantic partners. Female subjects held similar attitudes in regard to the desirability of these nontraditional women as romantic partners for males. In addition, these women were chosen least often by female subjects as same-sex friends. In general, the results of the study led Pfost and Fiore to conclude that women who pursue nontraditional careers may suffer negative social consequences by not being viewed as desirable romantic partners or friends. They suggested that anticipated negative responses to nontraditional achievement

may prompt women to avoid opportunities for fulfillment in a gender atypical career.

Students' perceptions of the differences between the sexes may include judgements that females are inferior in some ways. Robison-Awana et al. (1986) investigated adolescent self-esteem and the sex-role perceptions of 71 boys and 69 girls in the seventh grade. The boys not only rated themselves higher in self-esteem than did girls but also attributed significantly lower levels of self-esteem to the females. Senior high school students rated male and female characters in traditional and nontraditional occupations in a study by Lifschitz (1983). The researcher concluded that occupational stereotypes were more prevalent than sex-role stereotypes. Characters were evaluated on a number of personality traits but the ratings of students were related more to the perceived characteristics of people in certain occupations than the gender of the job holder. The author stated, however, that the data indicated women were rated as less ambitious and less intelligent than their male counterparts.

Other studies indicated that sex-role conflict may be an important factor in females' career aspirations. Concerns about combining family and work roles in particular appear to have an influence in the high school and college years. In a study of female students' attitudes toward sex roles and mathematics (Sherman, 1982), ninth-grade girls who

later took advanced mathematics courses showed evidence of sex-role conflict. There was conflict between female role requirements and achievement in traditional male areas. Although ambitious in occupational and family plans, they thought that a mother's place was in the home. They were ambivalent about being smart and, because of their high intellectual ability, were ill at ease with boys. Many girls structure their lives on the premise that males view the female's use of her intelligence with distaste (Matthews & Tiedeman, 1964).

Substantial numbers of bright and even gifted young women are consciously choosing careers well below their level of ability. Patterson (1973) stated that this is the result of the socialization process in this culture rather than a free and informed choice on the part of the individual. He emphasized that it is important for counsellors to develop modern programs and practices that can assist girls in making plans consistent with today's and tomorrow's world. He found, however, that the adolescent girl herself may be the most important limitation on effective counselling. In a sense, "such girls are victims of a cultural lag, where home and school have conditioned them to accept a role definition that is no longer valid" (Patterson, 1973, p. 270). The author emphasized that the cultural expectations of the domestic role, as well as the physiological fact of childbearing, impose great limitations

on the vocational role. McLure and Piel (1978) reported that one of the major barriers inhibiting high school female students from pursuing careers in science and technology was their doubts about combining family responsibilities with career demands.

A study of the attitudes of 363 women enrolled in agricultural programs and 612 women enrolled in home economics was conducted by Lyson and Brown (1982). They found that the attitudes of these college students toward social and economic equality were highly endorsed by women in both traditional (home economics) and nontraditional (agricultural) programs. Attitudes toward work and family matters, however, were less egalitarian. The consistently lower levels of approval for women working while they have children at home indicates that there are still contradictions between the role of mother and worker for women in both traditional and nontraditional fields. These results suggest that college women may be more inclined to agree with sexual equality in principle than in practice in their own lives.

DiBenedetto and Tittle (1990) researched the preferences of 118 undergraduate college students (87 female and 31 male) for commitment to work or to family. They developed their study in the context of a life-patterns or life-role perspective which "indicates a recognition that career and work cannot be understood independently of their



relationships to the other major adult roles of women" (p. 41). Using Job-Child Trade-off and Involvement Level dimensions, the researchers found that females in the sample tended to view preferences for job commitment and children in terms of a trade-off. They viewed their choices in terms of a preference for greater or lesser involvement in both parenting and work-role areas simultaneously. The males in the sample viewed females' work and parenting roles in the same manner. Men tended to view their choices in terms of parenting and work-roles as independent of each other. Trade-offs or different levels of involvement were not involved to any great degree. Females viewed the male's perspective in a similar way and tended not to see men as having to make the same choices that they themselves feel they must make. The dual-role conflict appeared to be regarded as a reality in the lives of females but not of males.

A product of females' sex-role socialization toward the home and traditional vocations has been low expectations among women that they can perform some of the tasks and behave in some of the ways required by nontraditional occupations. In a study of college students, Betz and Hackett (1986) found that males' occupational self-efficacy was equivalent for both male-dominated and female-dominated occupations. Females scored higher than males in occupational self-efficacy for traditionally female

occupations but scored lower for male-dominated jobs. From this study it appears that sex-stereotyping may result in females believing that women are not as capable as men in performing jobs that are traditionally male.

Internalization of these attitudes would have a strongly inhibiting effect on female students' career choices.

Females may not expect to succeed in nontraditional occupations and subsequently will not be attracted to them (Brooks and Betz, 1990). A study was conducted to "examine the utility of Vroom's (1964) expectancy model in predicting the perceived career options of college students" (p. 58). The sample consisted of 188 undergraduate students (78 male and 110 female). They measured the students' expectancies of success in and attractiveness toward twelve occupations. Six occupations were traditionally male-dominated and six were traditionally female-dominated (based on whether 66% or more of the job holders in each occupation were male or female, respectively). They found a lack of gender differences in work values. There were gender differences, however, in expectancies of success, valence (or attractiveness toward) and likelihood of choice in regard to male-dominated and female-dominated occupations. Scores of males on all three variables were significantly higher on the majority of the male-dominated occupations. Females, in contrast, scored significantly higher on the three variables on the majority of the female-dominated occupations. Brooks

and Betz suggested that "an objective assessment of the extent to which an occupation meets one's work values may not be relevant to the preference for the job when that job is stereotypic of the other sex" (p. 63). They believed that their results supported Gottfredson's (1981) suggestion that young people may reject occupations nontraditional for their sex and not consider them afterward if they fail to coincide with their values or interests. They also suggested that the expectancy model may provide ways of identifying perceived barriers to consideration of a broad range of career choices (for example, unrealistically low expectancies).

The studies of Brooks and Betz (1990), DiBenedetto and Tittle (1990), Pfost and Fiore (1990), Betz and Hackett (1986) and Sherman (1982) provide insights into females' sex-role conflicts and negative self-concepts that are similar to the findings of earlier studies (Matthews & Tiedeman, 1964; McLure & Piel, 1978; Patterson, 1973). The central theme emphasized by the above authors is that the stereotypical attitudes of students toward themselves and others appear to have an inhibiting effect in terms of educational and career aspirations.

#### Counsellors and Teachers

The overwhelming majority of studies done in this area has understandably concentrated on the attitudes of high

school guidance counsellors who have been directly responsible for career counselling with students (Ahrons, 1976; Bingham & House, 1973; Donahue & Costar, 1977; Engelhard, Jones & Stiggins, 1976; Thomas & Stewart, 1971). Teachers have not received as much attention in this area. Assessment of their attitudes is usually reported in conjunction with that of counsellors (Baum, 1989) or the more broadly defined group of significant others (Lemkau, 1983; Houser & Garvey, 1985).

One study that differentiated between the attitudes of teachers and guidance counsellors was conducted by Tetenbaum, Lighter and Travis (1981). Their sample consisted of 411 educators (269 females and 142 males). They found that guidance counsellors and school psychologists had more positive attitudes toward working mothers than either teachers or administrators. In a review of literature, they concluded that schools "are not transmitting realistic role expectations" (p. 370) for female students and "researchers have not given sufficient attention to educators' attitudes toward working women and to sex role perceptions in general" (p. 374).

Haring and Beyard-Tyler (1984) reviewed literature that indicated a pessimistic view of the school counsellor's role in facilitating nontraditional careers for women. They concluded that there may be a current trend away from job sex-typing by counsellors. Fox and Richmond (1979),

however, strongly suggested that professionals examine their own attitudes. They stated that counsellors cannot expose stereotypes they themselves accept and can hardly serve as a positive influence if they bring harmful bias to the counselling setting. Some counsellors do not remain in touch with current literature and recent developments in the world of work and "appear to be caught in a time warp, assuming that everything is as it was" (Herr & Cramer, 1988, p. 159).

Some studies suggested that counsellors hold the traditional sex-role stereotype that devalues career aspirations for women. Thomas and Stewart (1971) had 62 school counsellors (18 females and 44 males) listen to tapes of girls talking about themselves in an interview setting and then rate them on a number of dimensions. The counsellors tended to evaluate conforming (traditional career) vocational planning as more positive than "deviant" (pioneer career) vocational talk. Counsellors perceived the girls with "deviant" plans as more in need of counselling than girls with conforming plans. As might be expected, female counsellors were more accepting of so-called deviant as well as conforming female clients than male counsellors.

Ahrons (1976) suggested that counsellors expect women to experience conflict in vocational choices that men do not experience. Counsellors may perceive the career role for women as isolated from, or incompatible with, other female

roles (wife and mother). One serious implication of these findings, as Ahrons noted, is that counsellors may reflect these values in their counselling with girls and women. This would help to perpetuate the already severely restricted vocational outlook that most girls have. There is the possibility of stifling or discouraging, albeit unconsciously, young women's tenuously held nontraditional ideas and aspirations.

Donahue and Costar (1977) conducted a study in which 300 counsellors were instructed to select an appropriate occupation for case study subjects. The number of female counsellors was slightly less than half of the total sample. When the case study described a female, counsellors chose occupations that paid less, required less prerequisite education and were more closely supervised than when the same case study described a male. The data indicated that even though counsellors sometimes chose occupations for females that required formal education, they seldom chose a career that paid a high salary or was supervisory in nature. This suggests that it was viewed as socially acceptable for women to have an education, as long as they stayed in a dependent, supervised role.

School counsellors, especially the males, may often rate occupations as inappropriate for women (Medvene & Collins, 1976). They thought that nontraditional high-status occupations may be suitable for women but blue-collar

jobs such as plumber or truck driver were inappropriate. It appeared that counsellors judged occupations which require some degree of physical strength as less appropriate for women than other occupations. These findings are important because school counsellors were the group in the study that had the most contact with and influence upon high school females.

Male counsellors in general may have more conservative, traditional attitudes than female counsellors toward women's increasing participation in the world of paid employment (Engelhard et al., 1976). It may be that some male counsellors harbour negative attitudes toward women's increasing involvement in the workplace. Male counsellors may be less accurately informed than their female counterparts and may hold misconceptions about the discrepancy between men's and women's incomes and employment opportunities for women. They may tend to believe that women are less able than men and are unable to perform jobs traditionally held by males (Bingham & House, 1973). Both female and male counsellors, however, have exhibited significant changes in attitude in a more egalitarian direction and "narrow, unnecessarily restrictive sex-role definitions are no longer considered appropriate by either male or female guidance counsellors" (Engelhard et al., 1976, p. 371).

The role of the counsellor is of particular importance

given the high value that senior high female students place on talking with counsellors and job-related talks by teachers. Teachers or counsellors may discourage females from a non-traditional career goal, encourage them toward a traditional goal or imply that some jobs were for men and others for women (Rohfeld, 1977). Female students may feel they do not receive as much support from teachers as male students and may feel teachers blame the academic failure of older female students on their individual capabilities and lack of personal responsibility (Secretary of State, 1986).

It may be the case that counsellors either do not have adequate information about women in nontraditional occupations or their own biases regarding women's roles directly limit the information they offer during counselling. Counsellors tend to discuss job opportunities and salaries significantly more with students choosing a traditional career than with students selecting a nontraditional career, as well as the potential for getting a job, job status and opportunities for advancement (Sauter et al., 1980).

In a review of related literature, Fitzgerald and Crites (1980) noted that "the radical and rapid restructuring of women's societal role has often far outstripped the necessary revision in corresponding attitudes and expectations ... Like other members of society, members of the counselling profession are subject



to this cultural lag ..." (p. 44). They stressed that any counsellor working with women must actively attempt to alter his/her attitudes and biases regarding the female role, as well as to master the more cognitive aspects of the new career psychology of women. The most striking component of career planning in modern society is the increasing significance of science and technology in the work world. It is very important that young people be prepared for changes created by technological innovation (Science Council of Canada, 1981). Counsellors and teachers should be aware of the critical need of female students to acquire mathematical and scientific skills in order to avail of increasing career opportunities in science and technology areas.

Although Smith (1979) questioned whether sex bias in counselling had been adequately proven in research, the results of the studies reviewed suggest otherwise. Studies of attitudes of teachers and school counsellors, as well as the perceptions of those attitudes by students, have suggested that sex bias may be a factor in the career guidance process in some schools.

#### Attitudes Toward Science and Mathematics

Scott (1981) reported that, in Canada, considerably fewer girls than boys were studying senior physics and mathematics in high school. Differences in female and male participation in scientific areas of study are not explained

by intellectual abilities (Kimball, 1981). Researchers have conducted studies to provide information about the origins of these differences between females and males and to assess the impact on females' career decisions (Baum, 1989; Betz & Hackett, 1983; Fitzpatrick & Silverman, 1989; Handley & Hickson, 1978; Hollinger, 1983, 1985; McLure & Piel, 1978; Post-Kammer & Smith, 1986; Sherman, 1982, 1983).

Fitzpatrick and Silverman (1989) compared students in nontraditional (engineering and science) and traditional (humanities and social sciences) programs in a sample of 113 high-achieving college females. They found that science majors were more likely to report the strong positive influence of high school teachers.

In a study of 1017 talented female high school students, McLure and Piel (1978) stressed the importance that those girls attached to encouragement from others, including school personnel. A significant number of these girls reported that neither teachers nor guidance counsellors had favorable attitudes toward girls entering science/technology careers. Lack of encouragement from school personnel was perceived as a major barrier to their pursuing careers in scientific areas.

Sherman (1982) conducted research on the attitudes of 84 females in senior high school. She found that most of the students who had discontinued the study of mathematics did so because of a lack of confidence in their abilities in

that subject area. In a later study, Sherman (1983) re-administered the Fennema-Sherman Mathematics Attitudes Scales II to a group of 87 senior high girls who had previously been tested in grade nine. Thirty-two percent of the students reported that teachers had discouraged them from studying advanced mathematics courses. The author concluded from the results that there is a network of sex-role influences which makes mathematics, and the careers in which mathematics is needed, appear incongruent with the female role.

Mathematics self-efficacy expectations of college females are consistently and significantly weaker than those of their male peers. This may contribute to an explanation and understanding of the continued under-representation of women in science-based occupations. The low self-efficacy expectations and consequent avoidance of math-related course work prerequisite to majors and careers in the sciences are particularly characteristic of females (Betz & Hackett, 1983). Betz and Hackett (1986) discovered that females' self-efficacy expectancies were equal to males' when the tasks involved stereotypically female activities (eg. calculating a grocery bill in one's head). This supports the hypothesis of sex-role influences on self-estimates of efficacy. The authors suggested that female students may have been socialized to believe that mathematics is a subject that is more appropriate for males. Women may

believe that members of their sex may not be as capable as men in this area.

The encouragement by males in particular may help females overcome barriers to entering nontraditional occupations in the mathematics and science fields. Males tend to be influential in fostering the career development of women in the fields of engineering, physical science, accounting, economics and computer science. In contrast, females who chose a more traditional field in mathematics (teaching) stated that women were more influential in the development of their interest in that subject area (Handley & Hickson, 1978).

Hill, Pettus and Hedin (1990) suggested that attitudes of females toward science appear to undergo a negative change which may begin before the high school years. Differences in the pursuit of science careers based on gender were primarily based on lack of interest in these careers on the part of girls by the time they reach middle school. Hill, Pettus and Hedin thought that some type of socialization factors were at work which discouraged girls from science at that stage of their lives.

Female students' interest in science may begin to decline in elementary school (Klein, 1989). In a review of literature pertaining to science education for females, Klein concluded that "after the fourth grade, girls are less likely than boys to have an interest in science, to elect a

science class, or to experience success in the science classroom" (p. 28). The lack of role models in the science and engineering professions affects girls' perceptions of those careers. The perception of science as a masculine field is most pronounced in girls as they reach adolescence. Girls in high school indicated a lack of confidence in science, especially in the area of problem solving. This problem was not evident in girls in elementary school. Klein asserted that "differences between boys' and girls' achievement, attitudes and interest begin in the middle elementary school years" (p. 28). Interventions to improve the classroom science experiences of females, to change the perception of science as a masculine endeavor and to provide role models must begin in the elementary grades and continue throughout high school.

Linn and Hyde (1989) used meta-analysis to synthesize results from studies of gender differences in mathematics and science. They concluded that gender differences in cognitive abilities appear to have declined in the areas of verbal ability, spatial visualization, and mathematical computation and concepts. Males, however, have greater confidence than females in their abilities in mathematics and science and this difference emerges in high school. In contrast, there was no significant difference between the confidence levels of male and female students in elementary school. The researchers speculated that this finding may be

partly due to the greater representation of males in mathematics and science careers. The lack of role models for female students serves to perpetuate the situation. In regard to interest in science, they found no gender differences in students in the elementary grades. By the end of high school, however, males were more interested in mathematics and science than females. Linn and Hyde suggested that the science classroom environment be modified in schools to maximize opportunities for females to have more positive learning experiences.

Parents may play a significant role in influencing students' participation in gender role stereotyped activities (Eccles, Jacobs and Harold, 1990). Two longitudinal studies of child development were conducted in the context of the family and the school. One was a seven-year study of 2000 adolescents which was begun when the students were in sixth grade. The second was a four-year study of 600 children which began when they were in kindergarten and the first and third grades. The researchers analyzed the role that parents may play in influencing their children to engage in gender role stereotyped activities. Parents' perceptions of their children's competency levels and their expectations for their children's performance were assessed in the areas of mathematics, English and sports. Daughters were rated by their parents as more competent in English and sons were

rated as more competent in sports. There was no significant difference between the male and female students in the parents' ratings of the younger children's mathematical competence. In the study of the older children, however, males were rated by their parents as more competent in mathematics than females. The researchers found no differences in the male and female students in terms of ability, achievement or effort in mathematics. They concluded that a "perceptual bias was operating in the formation of parents' impressions of their children's competencies in gender role stereotyped activity domains" (p. 198). They speculated that this bias would influence children's self-perceptions and ultimately lead to a self-fulfilling prophecy which would affect the future career plans of these students.

Using the statistical technique of meta-analysis, Hyde, Fennema, Ryan, Frost and Hopp (1990) examined gender differences in mathematics affect and mathematics attitudes. They analyzed results from 126 separate samples which represented testing of 63,229 subjects (31,116 males and 32,113 females). The age trend for general attitude toward mathematics was in the direction of increasing gender differences (males having more positive attitudes) with increasing age. Similar results were found in the area of mathematics self-concept or confidence. The largest effect sizes for mathematics self-confidence occurred among high

school aged students. There was a highly significant difference in the area of stereotyping of mathematics as a male domain. The results indicated that males stereotype mathematics as a male domain considerably more than females. The peak in this gender difference occurred in the high school years. The largest effect sizes for mother's attitude, father's attitude and teachers' attitude also occurred in the high school years. During high school, boys reported more favorable attitudes on the part of adults toward their mathematical performance than girls. There was evidence, however, that attitudes of significant others (parents and teachers) were undergoing a change. Male students reported more positive attitudes on the part of parents and teachers than female students in the 1970's but the pattern appeared to be reversing in the 1980's. The researchers expressed concern about the stereotyped views of males. They speculated that this may "lead male peers of female students to indicate in a variety of subtle ways that females who achieve in mathematics are somehow less feminine and thus put pressure on females not to achieve in mathematics" (p. 310). In addition, they thought that these stereotyped views "might also lead male teachers to discourage girls from taking mathematics courses" (p. 310).

The results of the above studies suggest that the major differences in attitudes of male and female students toward



science and mathematics emerge in the high school years. Levels of interest and confidence appear to be higher among males at this level. Differences in attitudes of parents and teachers and related differences in perceived levels of support for males and females were suggested by several researchers as factors which may have an inhibiting effect on the self-concept of females in this area. In spite of evidence that attitudes are becoming more egalitarian, stereotyping of mathematics and science as male domains may still be a negative influence.

#### Summary

Gottfredson (1981), Astin (1984) and Farmer (1985) have developed models of career choice. All three models incorporated both social/environmental and psychological or self-concept factors in an attempt to provide a developmental framework for understanding the career development of young people and one of the important variables is significant others.

A great deal of research has been conducted to ascertain the effects of support from significant others on females' choices of nontraditional careers. The attitudes of those significant others which underline the level of support and encouragement they offer females have not been investigated as widely (Tetenbaum et al., 1981).

Several researchers have concluded that significant

others have a strong influence on a female's choice of career (Bridges & Bower, 1985; Heins et al., 1982; Houser & Garvey, 1983, 1985; Trigg & Perlman, 1976). Males may have a particularly strong influence on females' career paths (Boak & Boak, 1989; Hawley, 1971, 1972; Lemkau, 1983).

In past research investigating students' attitudes and perceptions toward women's role in society, sex-role stereotyping is a recurring theme (Betz & Hackett, 1986; Haring & Beyard-Tyler, 1984; Labour Canada, 1986; Lifschitz, 1983; Lyson & Brown, 1982; Matthews & Tiedeman, 1964; McLure & Piel, 1978; Patterson, 1973; Robison-Awana et al., 1986; Sherman, 1982; Weeks & Porter, 1983). Several researchers have found that the attitudes of school counsellors may also contain elements of sex-stereotyping (Ahrons, 1976; Donahue & Costar, 1977; Fitzgerald & Crites, 1980; Haring & Beyard-Tyler, 1984; Medvene & Collins, 1976; Sauter et al., 1980; Thomas & Stewart, 1971). Rohfeld (1977) reported that teachers as well as counsellors may not be supportive of females with nontraditional career aspirations. Tetenbaum et al. (1981) found that teachers and administrators had less positive attitudes than guidance counsellors toward working mothers. Bingham & House (1973) and Engelhard et al. (1976) found that male counsellors may have negative attitudes toward women's changing social role. On a positive note, Engelhard et al. (1976) suggested that the attitudes of school counsellors in general may be changing

in an egalitarian direction.

Females' participation in science-related educational programs may be strongly influenced by teachers (Fitzpatrick & Silverman, 1989). McLure & Piel (1978) suggested that teachers and guidance counsellors may not have positive attitudes toward females entering science and technology careers. The stereotyped views of parents may also have a negative influence on females' interest and confidence levels in regard to the areas of mathematics and science (Eccles et al, 1990). Sherman (1982, 1983) concluded that sex-role influences may be inhibiting females' participation in mathematics programs and careers. Differences in attitudes toward science and mathematics between male and female students appear to emerge during the high school years (Klein, 1989; Linn & Hyde, 1989; Hyde et al, 1990). Assessment of the attitudes of school personnel towards women's roles in the work world and the social implications of those changing roles would be an important step in identifying whether the influences of school personnel may be encouraging or inhibiting for female students (Tetenbaum et al., 1981).

## CHAPTER III

### Methodology

#### Introduction

This chapter describes the procedures employed in the development of the instrument, the selection of the sample, the collection of the data and the type of statistical analysis used.

#### Instrumentation

A review of previously developed and published sex-role attitude scales revealed a wide variation in the number of domains that were assessed. Some scales had a relatively narrow focus, such as the eight-item scale developed by Houser and Beckman (1980) to examine attitudes toward working mothers. Other scales tapped a relatively broad number of dimensions as in the 95-item Sex-Role Egalitarianism Scale developed by Beere et al. (1984) which included items about interpersonal and sexual relationships between males and females. The Attitudes Toward Women Scale developed by Spence, Helmreich and Stapp (1973) included items dealing with social and sexual behaviors (dating and courtship, alcohol consumption and using obscene language). Some of the statements in the Sexist Attitudes Toward Women Scale (Benson & Vincent, 1980) dealt with the evaluation of women on the basis of physical attractiveness, the treatment

of women as sexual objects and premarital sexual activity of females. Since these scales included the evaluation of behaviors unrelated to the concept of the changing work patterns of women, a new questionnaire was developed which contained items relevant to the underlying career perspective. Although no items were taken from the existing scales, similar issues related to sexual equality, nontraditional occupations for women and dual roles were addressed. See Appendix A for a list of sources used in the development of the questionnaire.

An item pool was compiled through a review of the related literature. A sample of 52 items was chosen as the preliminary version of the instrument with responses categorized in a Likert-scale format. This version was reviewed by two members of the Faculty of Education at Memorial University of Newfoundland. Modifications based upon their suggestions were subsequently made to improve the content and format of the questionnaire and a revised 44-item version was developed.

The items in the questionnaire were divided into four different subscales in order to facilitate a more detailed analysis of the data. Attitudes toward women's roles are multidimensional in nature. It is likely that the views of many people may lie at the conservative, traditional end of the continuum on some issues and at the contemporary, liberal end on others. This approach recognizes what

Helmreich et al. (1982) refer to as the "importance of examining specific as well as global indices of sex-role attitudes in attempting to document social change" (p. 662).

The four subscales were delineated as follows:

1. **Sexual Equality:** Items related to sexual equality in the areas of education and employment (14 items).

2. **Dual Role:** Items which dealt with the interaction of employment and family roles (12 items).

3. **Nontraditional:** Items related to nontraditional employment for women (13 items).

4. **Information/Knowledge:** Items which dealt with information or knowledge about particular economic concerns of females in society (5 items).

The five items in the Information/Knowledge subscale were included in order to assess whether misinformation may be a factor related to overall attitude. Educators cannot be expected to actively support changes in women's career paths if they are unaware that inequities exist in the present system.

The Likert-scale format provided the participants with five choices for responding to each item: (1) strongly disagree; (2) disagree; (3) undecided; (4) agree; and (5) strongly agree. Some statements reflected a conservative, traditional attitude and others a liberal, egalitarian attitude. These variations were relatively balanced throughout the scale so that the risk of response set would

be minimized. The nonegalitarian statements were coded for reverse scoring. All items were ordered so that a high score reflected an egalitarian response and a low score represented a conservative orientation. High total scores were interpreted as indicating a positive attitude toward the career-related aspects of women's changing role which were included in the questionnaire.

Included in the questionnaire was a section which requested demographic data from each respondent. This demographic information provided the independent variables for the subsequent statistical analysis of the questionnaire results and permitted comparisons of the attitudes of various groups.

The questionnaire was piloted with a sample of 36 practising teachers (28 females and 8 males) enrolled in a third-year level education course at Memorial University of Newfoundland during the 1990 summer session. There were 14 teachers in the 20-29 year age group, 17 in the 30-39 year age group and 5 were 40 years of age or older. The data obtained from this pilot study were used to assess the reliability of this version of the instrument through item analysis using the SPSS-X (Statistical Package for the Social Sciences) computer program. The alpha reliability coefficient computed for the entire questionnaire was .88. Suggestions from the subjects were taken into account in a further revision of the questionnaire. Changes were made in

the general format as well as rewording of particular items for clarification. The final breakdown of the four subscales as well as a copy of the questionnaire can be found in Appendix B.

### **Procedures**

This study was conducted in the province of Newfoundland and Labrador in eight schools of the Avalon Consolidated Integrated School Board and 12 schools of the Terra Nova-Cape Freels Integrated School Board. Letters were sent to the superintendents of the two school boards to inform them of the nature and purpose of the research project and to request their permission to conduct the study (see Appendix C). Permission was granted and letters were sent to the principals of twenty schools in order to request their cooperation and support.

After receiving approval from the principals, copies of the questionnaires were sent to the twenty schools. Each principal distributed the questionnaires to the members of his/her staff and returned those completed to the researcher. Follow-up procedures were conducted by the researcher through phone calls to the principals. Completed questionnaires were received from all schools involved in the study. In addition, several principals agreed to approach teachers who had not completed questionnaires and encourage them to participate in the study. Additional



questionnaires were subsequently sent to the researcher from several schools. Out of a possible total of 496 respondents, 287 (57.9%) educators completed and returned questionnaires.

### Sample

The sample for the study consisted of 287 educators in the province of Newfoundland and Labrador: 122 (42.5%) from eight schools in the urban area of the Avalon Consolidated Integrated School Board and 165 (57.5%) from 12 schools in the rural areas of the Terra Nova-Cape Freels Integrated School Board. The eight schools in the urban area of the Avalon Consolidated Integrated School Board were all in the city of St. John's which has a population of approximately 96,000 (Andrews, 1991). Each rural community in the Terra Nova-Cape Freels Integrated School Board had a population of less than 5000. A breakdown of the sample of rural and urban participants by independent variables can be found in Table 1.

The male and female educators were fairly evenly represented in the sample, comprising 47.7% and 52.3%, respectively. The respondents ranged in age from 23 to 56 and were subsequently assigned to one of four age groups: 20-29 years old; 30-39 years old; 40-49 years; and 50-59 years old. Since there were only 11 educators in the 50-59 year age group, it was decided to combine them with the 40-

49 age group to form a 40 and over category. Those respondents whose ages ranged from 20-29 years of age comprised 15% of the sample. The two other age groups were more evenly represented in that 42.7% ranged from 30-39 years of age and 42.3% were in the 40 and over group.

Table 1

**Breakdown of Rural and Urban Respondents By Independent Variables**

Variable	<u>Rural</u>		<u>Urban</u>		<u>Total</u>	
	No.	%	No.	%	No.	%
<u>Age</u>						
20-29	28	17.5	13	11.4	41	15.0
30-39	73	45.6	44	38.6	117	42.7
40 and Over	<u>59</u>	36.9	<u>57</u>	50.0	<u>116</u>	42.3
Total	160		114		274	
<u>Sex</u>						
Male	85	53.1	48	40.3	133	47.7
Female	<u>75</u>	46.9	<u>71</u>	59.7	<u>146</u>	52.3
Total	160		119		279	
<u>Marital Status</u>						
Single	34	20.6	19	15.6	53	18.5
Married	124	75.2	94	77.0	218	75.9
Previously Married	<u>7</u>	4.2	<u>9</u>	7.4	<u>16</u>	5.6
Total	165		122		287	

Note: Not all sample totals are equal because of non-response items.

The respondents indicated their marital status by placing themselves in one of three major groups: single, married or previously married (divorced, separated or widowed). The married group made up the majority of respondents at 75.9% of the sample. Single respondents and those who were previously married comprised 18.5% and 5.6%, respectively.

### Statistical Analysis

This study is a comparative analysis of educators' attitudes toward career-related aspects of women's changing role in society. The statistical analysis involved comparing the attitude scores of the respondents across different groupings based on the independent variables. The independent variables studied were: (a) age; (b) sex; (c) marital status; and (d) location. The dependent variables were attitude scores on the four subscales (Sexual Equality, Dual Role, Nontraditional and Information/Knowledge) as well as the entire questionnaire.

Separate one-factor analysis of variance procedures were conducted to compare the respondents' mean scores on the attitude questionnaire (dependent variable) across different groupings of each independent variable. Two-way (or two-factor) analysis of variance designs were also used in order to identify any significant interaction effects between the factors. In addition to the analysis of the

means of the respondents' total scores on the questionnaire, the same statistical procedures were also used to compare mean scores in each of the four subscales.

The reliability of the questionnaire was assessed through item analysis. The alpha reliability coefficient computed for the instrument used in this study was .93.

## CHAPTER IV

### Presentation, Analysis and Interpretation of Results

The purpose of this study was to assess the attitudes of educators toward the changing role of women in society. Questionnaires were completed by school personnel in selected rural and urban settings in Newfoundland.

This chapter is a presentation of the analysis of the data collected. Descriptive and inferential statistics are presented as they pertain to each of the research questions. The SPSS-X (Statistical Package for the Social Sciences) program was used to analyze the data.

#### Subscale Analysis

The items in the questionnaire were divided into four subscales: (a) Sexual Equality; (b) Dual Role; (c) Nontraditional; and (d) Information/Knowledge.

**Sexual Equality.** The Sexual Equality subscale consisted of 14 items dealing with the principle of sexual equality in education and the workplace. The mean total score of the subscale was 62.71 with a standard deviation of 5.59. The frequency distribution showing the occurrences of scores can be found in Appendix D. The alpha reliability coefficient computed for this subscale was .82.

The item mean score for the Sexual Equality subscale (4.48) was slightly less than the midpoint between the

"agree" and "strongly agree" points on the five-point Likert response scale. This indicates that, on average, the respondents had an egalitarian attitude toward the principle of sexual equality in education and the workplace.

**Dual Role.** The Dual Role subscale consisted of 12 items that were related to the increasing participation of married women and mothers in the paid workforce and the problems inherent in finding a balance between the responsibilities of home and the workplace. The mean total score for the subscale was 48.18 with a standard deviation of 7.29. The frequency distribution showing the occurrences of scores can be found in Appendix D. The alpha reliability coefficient computed for this subscale was .86.

The item mean score for the Dual Role subscale (4.02) was slightly above the "agree" point on the five-point Likert response scale. This indicates that, on average, the respondents had an egalitarian attitude toward the participation of married women and mothers in the workplace.

**Nontraditional.** The 13 items in the Nontraditional subscale dealt with attitudes toward women entering nontraditional occupations. The mean total score for the subscale was 50.82 with a standard deviation of 7.20. The frequency distribution showing the occurrences of scores can be found in Appendix D. The alpha reliability coefficient computed for this subscale was .87.

The item mean score for the Nontraditional subscale

(3.91) was slightly less than the "agree" point on the five-point Likert response scale. This indicates that, on average, the respondents had an egalitarian attitude toward the trend of women entering nontraditional occupations.

**Information/Knowledge.** The four items in the Information/Knowledge subscale dealt with the awareness of the respondents about the financial inequities that many women face in our society. The mean total score for the subscale was 10.11 with a standard deviation of 2.33. The frequency distribution showing the occurrences of scores can be found in Appendix D. The alpha reliability coefficient computed for this subscale was .66. Item #36 was dropped from the statistical analysis because of the weak correlation between it and the subscale.

The item mean score for the Information/Knowledge subscale (2.53) was below the "undecided" point on the five-point Likert response scale. This indicates that, on average, the respondents did not appear to be well informed about this issue.

#### Between Groups Differences

Statistical procedures were used to determine if there were any significant differences between the mean scores of the respondents on the four subscales as well as on the total scale based on the variables of age, sex, marital status, location or a combination of these.

One-factor ANOVA procedures were used to determine if there were significant differences in the Sexual Equality subscale between various levels of each independent variable. There was a significant sex effect,  $F(1,262) = 40.80$ ,  $p < .001$ . Females had more egalitarian attitudes toward sexual equality in education and the workplace than males ( $M$  for females = 64.58;  $M$  for males = 60.35).

There was a significant effect for location,  $F(1,269) = 4.68$ ,  $p < .031$ . Urban respondents had more egalitarian attitudes than rural respondents toward sexual equality in education and the workplace ( $M$  for urban = 63.45;  $M$  for rural = 61.93).

There were no significant differences between various levels of the remaining independent variables (age or marital status). Pairwise interactions were conducted among the four independent variables (sex, age, location, marital status). Of the six analyses on the Sexual Equality subscale, no interactions yielded statistically detectable results.

The ANOVA procedure was used to determine if there were significant differences in the Dual Role subscale between various levels of each independent variable. As well, pairwise interactions were conducted among the four independent variables (sex, age, location and marital status). Of the six possible interactions, only the sex x location interaction yielded a statistically detectable



result,  $F(1,231) = 4.18$ ,  $p < .042$ . Urban females had more egalitarian attitudes than rural females toward the participation of married women and mothers in the workplace ( $M$  for urban females = 52.36;  $M$  for rural females = 50.50). There was no significant difference between rural and urban males.

There was a significant sex effect in this subscale,  $F(1,256) = 67.69$ ,  $p < .001$ . Females had more egalitarian attitudes toward the participation of married women and mothers in the workplace than males ( $M$  for females = 51.55;  $M$  for males = 44.84).

There was a significant age effect,  $F(2,263) = 3.25$ ,  $p < .04$ . Both younger respondents (20-29 years) and respondents aged 30-39 years had more egalitarian attitudes toward the participation of married women and mothers in the workplace than older (40 and over) respondents ( $M$  for 20-29 years = 50.16;  $M$  for 30-39 years = 49.03;  $M$  for 40 and over = 47.12).

There were no significant differences between various levels of the remaining independent variable (marital status).

The ANOVA procedure was used to determine if there were significant differences in the Nontraditional subscale between various levels of each independent variable. As well, pairwise interactions were conducted among the four independent variables (sex, age, location and marital

status). Of the six possible interactions, only the sex x location interaction yielded a statistically detectable result,  $F(1,231) = 5.71$ ,  $p < .018$ . Urban females had more egalitarian attitudes than rural females toward women entering nontraditional occupations ( $M$  for urban females = 55.43;  $M$  for rural females = 52.94). There was no significant difference between rural and urban males.

In this subscale, there was a significant sex effect,  $F(1,259) = 75.20$ ,  $p < .001$ . Females had more egalitarian attitudes toward women entering nontraditional occupations than males ( $M$  for females = 54.22;  $M$  for males = 47.13).

There was a significant age effect,  $F(2,265) = 3.11$ ,  $p < .046$ . Both younger respondents (20-29 years) and respondents aged 30-39 years had more egalitarian attitudes toward women entering nontraditional occupations than older (40 and over) respondents ( $M$  for 20-29 years = 52.50;  $M$  for 30-39 years = 51.55;  $M$  for 40 and over = 49.60).

There were no significant differences between various levels of the remaining independent variable (marital status).

One-factor ANOVA procedures were used to determine if there were significant differences in the Information/Knowledge subscale between various levels of each of the independent variables. There was a significant difference between the respondents based on location,  $F(1,272) = 9.09$ ,  $p < .003$ . Respondents from the urban area were more aware

than those from the rural areas of the financial inequities that many women face in our society ( $M$  for urban = 10.71;  $M$  for rural = 9.86).

There was also a significant difference between the respondents based on sex,  $F(1,264) = 8.13$ ,  $p < .005$ . Female respondents were more aware than male respondents of the financial inequities that many women face in our society ( $M$  for females = 10.58;  $M$  for males = 9.78).

There were no significant differences between various levels of the remaining independent variables (age or marital status). Pairwise interactions were conducted among the four independent variables (sex, age, location and marital status). Of the six analyses on the Information/Knowledge subscale, no interaction yielded a statistically detectable result.

The mean total score for the entire sample was 172.79 with a standard deviation of 22.52. The frequency distribution of total scores on the questionnaire can be found in Appendix D. The overall item mean (4.02) for the 287 respondents was slightly above the "agree" point on the five-point response scale. This indicates that, on average, the respondents indicated an egalitarian attitude toward the aspects of women's changing role in society that were included in the questionnaire.

There was a significant sex effect,  $F(1,277) = 62.99$ ,  $p < .001$ . Females displayed significantly more egalitarian

attitudes than males toward the aspects of the changing role of women in society that were included in the questionnaire.

The mean age of all of the respondents was 38.06 with an overall age range from 23 to 56. A one-factor ANOVA (analysis of variance) procedure was used to determine that there was a significant difference between the three age groups,  $F(2,284) = 4.03$ ,  $p < .019$ . Both younger respondents (20-29 years) and respondents aged 30-39 years displayed significantly more egalitarian attitudes than older respondents (40 and over) toward the aspects of women's changing role in society that were included in the questionnaire.

There were no significant differences between the respondents on the basis of marital status or location. Pairwise interactions were conducted among the four independent variables (sex, age, location and marital status). Of the six analyses on the entire questionnaire, no interaction yielded statistically detectable results.

A supplementary analysis was conducted to examine the 10 highest- and 10 lowest-ranked items. The 10 highest-ranked items and their means, as measured on the entire questionnaire, are listed in Table 2 in rank order from highest to lowest level of agreement. All of the ten highest-ranked items were in the Sexual Equality subscale. The respondents expressed their highest level of agreement with those statements that relate to sexual equality in

education and in the workplace.

The 10 lowest-ranked items and their mean scores, as measured on the entire questionnaire, are listed in Table 3 in rank order from lowest to highest level of agreement. Almost half of the lowest-ranked items were in the Information/Knowledge subscale. In fact, all four items in this subscale were included in the list (numbers 34, 32, 16, and 44). Low scores in this subscale indicate a relatively low level of information or knowledge about the economic disparity between females and males.

Three items (numbers 42, 24, and 21) were in the Nontraditional subscale. A relatively low level of support for women entering blue-collar occupations and high school teaching jobs was indicated by the scores. In addition, the respondents appeared to be undecided as to whether barriers to females entering nontraditional occupations have been removed. Three items (numbers 20, 23 and 43) were in the Dual Role subscale. The relatively low scores indicated that the respondents appeared to be undecided about the effects of married women working outside the home and whether or not employers should make accommodations for the domestic responsibilities of working mothers. They also appeared to have a relatively low level of support for mothers working outside the home when their children were young.

**Table 2****Ten Highest-Ranked Items With Mean Scores**

Item	Item Mean
8. Girls should be given as much encouragement as boys to go to college or university.	4.825
3. Female students should be encouraged as much as male students to take academic or advanced mathematics courses.	4.818
26. Males and females who perform similar job duties should be paid equally.	4.738
12. A female should get only enough education and training in order to obtain a job to fall back on in case she doesn't get married.	*4.667
41. Promotions and job appointments should be based on merit alone, without regard to gender.	4.650
19. Female students should be encouraged as much as male students to take physics courses.	4.600
25. Women do not need as high an education level as men because they can depend on their husbands to support them and their families.	*4.593
31. It is realistic to expect women to earn less than men because most women are married to men who already earn a salary.	*4.568
14. Mathematics and science courses are not as important for female students as for male students because males need them more often for the types of careers they enter.	*4.516
22. Post-secondary training and education of females are often a waste of resources because many of them do not stay full-time in the workforce after they have children.	*4.432

\*These items were coded for reverse scoring.

**Table 3****Ten Lowest-Ranked Items With Mean Scores**

Item	Item Mean
34. The majority of women in paid employment work because of financial necessity.	2.875
32. Generally speaking, men and women with equal education levels who work full-time earn similar salaries.	*2.943
42. Most jobs are now open to males and females so if women fail to obtain jobs that were traditionally male occupations it is because they are not suitable for these positions.	*3.286
16. Women's salaries have increased substantially in recent years and they have little reason to complain about gender differences in wages.	*3.617
24. Most women are physically able to handle blue-collar jobs such as auto mechanic or plumber.	3.639
43. Employers should make it easier for working mothers by offering more part-time employment and more flexible working hours.	3.644
44. Generally speaking, female single parents are as financially well off as male single parents.	*3.694
21. There should be more female teachers at the high school level.	3.704
20. The employment of women outside the home has had a negative effect on the institution of the family.	*3.718
23. Mothers of children under 3 years old should not work outside the home unless it is financially necessary.	*3.729

\*These items were coded for reverse scoring.

**Table 4****Correlations Between the Four Subscales and Age**

	AGE	NCAT	DCAT	SCAT
NCAT	-.162**	-	-	-
DCAT	-.185**	.693**	-	-
SCAT	-.165**	.709**	.643**	-
ICAT	.010	.426**	.352**	.345**

NCAT - Nontraditional Subscale

DCAT - Dual Role Subscale

SCAT - Sexual Equality Subscale

ICAT - Information/Knowledge Subscale

\*\* Significant at the .01 level

The correlation coefficients in Table 4 indicate relationships between age and the four subscales as well as the relationships of the four subscales with each other. Age was converted to a continuous variable for this statistical procedure. The effects of the age of the respondent were slightly negative on all of the subscales,



except for the Information/Knowledge subscale which was near zero. On the Sexual Equality, Dual Role and Nontraditional subscales, there was a tendency for attitude scores to be less egalitarian with increasing age.

There were significant relationships between the various subscales. There were relatively high positive relationships among the Nontraditional, Dual Role and Sexual Equality subscales. Scores on one of those subscales were likely to correlate highly with scores on the other two subscales. Moderate positive relationships with the Information/Knowledge subscale were indicated for the other three subscales (Nontraditional, Dual Role and Sexual Equality). Scores on the Information/Knowledge subscale would be expected to have a moderate positive correlation with scores on the other three subscales.

### Regression Analysis

A regression analysis was used to analyze the main effects of sex, age, location and marital status. In all cases, sex was entered as the first predictor using forced entry followed by age, location and marital status in a forward stepwise regression. For the Nontraditional, Dual Role and Sexual Equality subscales, sex was the only predictor to enter the equation. For the Information/Knowledge subscale, sex and location were the only variables to enter into the equation.

In the Nontraditional subscale, sex accounted for 21.7% of the variance in scores. In the Dual Role and Sexual Equality subscales, sex accounted for 20% and 16.2% of the variance, respectively. Sex and location were the significant predictors in the Information/Knowledge subscale and the addition of location accounted for an additional 3% of the variance. Both predictors accounted for 5.5% of the variance in scores.

### Summary

In the Sexual Equality subscale, there was a significant difference on the basis of sex. Females had more egalitarian attitudes than males toward sexual equality in education and the workplace. There was also a significant difference on the basis of location. Urban respondents had more egalitarian attitudes than rural respondents.

There were significant differences in the Dual Role subscale on the basis of sex and age. Females had more egalitarian attitudes than males toward the participation of married women and mothers in the workplace. Younger educators (20-29 years) and educators aged 30-39 years were more egalitarian than older educators (40 and over). There was a significant interaction effect in this subscale between sex and location. Urban females had more egalitarian attitudes than rural females but there was no

significant difference between rural and urban males.

In the Nontraditional subscale, there were significant differences on the basis of sex and age. Females had more egalitarian attitudes toward women entering nontraditional occupations than males. Younger educators (20-29 years) and educators aged 30-39 years were more egalitarian than older (40 and over) educators. There was a significant interaction effect in this subscale between sex and location. Urban females had more egalitarian attitudes than rural females but there was no significant difference between rural and urban males.

There were significant differences in the Information/Knowledge subscale on the basis of location and sex. Respondents in the urban area were more aware than those in the rural areas of the financial inequities that many women face in our society. Females were also more aware than males.

The list of the ten highest-ranked items in the whole questionnaire was comprised entirely of items from the Sexual Equality subscale. The item mean score for this subscale was the highest of the four, indicating a high level of agreement with statements that relate to sexual equality in education and the workplace. The list of the ten lowest-ranked items in the entire scale included all four items in the Information/Knowledge subscale. The item mean score for this subscale was the lowest of the four,

indicating a relatively low level of information or knowledge about the economic disparity between females and males.

The results of this study indicated that the educators were generally egalitarian in their attitudes toward career-related aspects of women's role in society. There were significant differences in the total score, however, on the basis of sex and age. Females had more egalitarian attitudes than males. Younger respondents (20-29 years) and those aged 30-39 years were more egalitarian than older respondents (40 and over).

A regression analysis indicated that sex was the best predictor to enter the equation in the Nontraditional, Dual Role and Sexual Equality subscales. Both sex and location were the best predictors in the Information/Knowledge subscale.

## CHAPTER V

### Summary, Discussion and Recommendations

Contained in this chapter are: (a) purpose of the study; (b) discussion of research findings; (c) limitations of the study; and (d) recommendations for further research and intervention strategies.

#### Purpose of the Study

Although there has been an increase in the participation of females in the paid work force, they tend to enter generally low-paid occupations with limited opportunity for advancement. Educators should be aware of the consequences of occupational segregation as well as the broader social implications of women's changing role in society. In addition, they should be encouraged to analyze their attitudes toward females' educational and career decisions. Since educators in the school system are expected to help young people prepare for the future, it is reasonable to assume that they have an influence upon the career choices of students.

The purpose of this study was to assess the attitudes of educators toward various aspects of women's changing role in society. The emphasis was on factors associated with females' increased participation in the workforce and their gradual movement into occupational areas traditionally held

by males. The particular nature of these attitudes may shed some light on the kinds of influences educators may be exerting on students.

### Discussion of Research Findings

The mean total score of the respondents was in the egalitarian direction ( $M = 172.79$ ) with an item mean score of 4.02 (at the "agree" point on the Likert scale). This indicates that the respondents had a generally egalitarian attitude toward the career-related aspects of women's changing role that were included in the questionnaire.

**Sex.** Sex was the variable most consistently related to differences in attitude scores. There were significant differences between the scores of males and females on all four of the subscales as well as the entire questionnaire. Females had more egalitarian attitudes than males and were more aware of the financial inequities that many women face in our society.

This result was not surprising, for all of the females in the sample were in the workforce and presumably have a vested interest in the principle of sexual equality as it relates to careers. In particular, the high endorsement of dual roles by the females was not unexpected, since nearly two thirds (66.4%) of the female respondents were married working women. Males, on the other hand, may not feel as strongly about social changes which may invest females with

more economic and vocational power. Many males may perceive these changes in terms of a loss of power or relatively privileged status for them, not only in the workplace but in their domestic lives as well. They may be resistant to the idea that they may have to become more open to the changing role of women in the workplace as well as to the increased responsibilities that may be expected of them in their family lives. Bingham and House (1973) speculated that "the idea that women are as able as men, can do most jobs as well as men, are capable of performing in dual roles and are in need of more occupational opportunities may very well be threatening to some men" (p. 267). Vestiges of this nonegalitarian attitude may still linger, even among a highly educated group of males.

It has been suggested that males may have a particularly strong influence on females' career decisions (Boak & Boak, 1989; Hawley, 1971, 1972; Lemkau, 1983). It is noteworthy that 67.2% of the respondents at the high school level were male. The gender imbalance at this level is a matter of concern, especially since students are usually making important educational and career decisions at this point in their schooling. This may be particularly important in the light of studies which have stressed the sex-role conflict experienced by many female adolescents, especially in terms of combining family and work roles (DiBenedetto & Tittle, 1990; Lyson & Brown, 1982; Matthews &

Tiedeman, 1964; McLure & Piel, 1978; Sherman, 1982). In addition, female adolescents may be less likely to consider nontraditional occupations if they perceive that many of the educators at the high school level have less than positive attitudes toward that decision.

Other researchers have found similar results to those of the present study. Bayer (1975) found that students who endorsed a strong sexist position in relation to the traditional female role were more likely to be male. Engelhard et al. (1976) concluded that male counsellors were significantly more likely than female counsellors to have negative attitudes toward the dual role and to believe that the trend toward more working mothers has had a negative effect on children. Bingham and House (1973) examined the extent to which misinformation prevailed among school counsellors. They found that female counsellors had more accurate information about the employment status of women than male counsellors. Other studies have found a similar sex effect (Beere et al., 1984; Benson & Vincent, 1980; Etaugh & Spiller, 1989; Helmreich et al., 1982; King & King, 1985; Roper & Labeff, 1977; Spence et al., 1973).

**Age.** There were significant age effects in the Dual Role and Nontraditional subscales, as well as in the entire questionnaire. Younger educators (20-29 years) and those aged 30-39 had more egalitarian attitudes than those who were older (40 and over).



One may speculate that sex-role stereotypes among educators, particularly in regard to women's career roles, may become less prevalent in the future. In the meantime, the older group of educators comprised 42.3% of the total sample and their less egalitarian attitudes are a matter of concern.

The reason for this age effect is not clear. It may be due to the fact that many people become more conservative in their attitudes as they become older. It may also be related to the cohort effect: older respondents may have simply clung to traditional attitudes that they have in common with many of their peers and that are a reflection of the prevailing social beliefs of an earlier time.

Other researchers have found a similar difference in attitudes based on age. Welch (1975), in assessing females' attitudes toward the women's rights movement, found that younger women expressed more positive attitudes than older women. Other studies have found that younger groups had more contemporary, liberal attitudes than older groups on the Sexist Attitudes Toward Women Scale (Benson & Vincent, 1980) and the Attitudes Toward Women Scale (Clingman & Musgrove, 1977; Helmreich et al., 1982; Slevin & Wingrove, 1983; Spence, Helmreich & Stapp, 1973).

**Location.** There was a significant effect for location in the Sexual Equality and Information/Knowledge subscales. Urban educators had more egalitarian attitudes than rural

educators toward the principle of sexual equality in education and the workplace. They were also more aware than those in the rural areas of the financial inequities that many women face in our society. In the Dual Role and Nontraditional subscales, an interaction effect between sex and location indicated that urban females were more egalitarian than rural females.

Special interest groups which deal with various aspects of women's rights are more numerous in the urban areas than in the rural communities. Urban educators may be more aware of the issues and principles of sexual equality advocated by these groups. Educators in the urban areas also appear to be more aware of the general financial necessity of females' paid employment. The financial pressures of dealing with the higher cost of living (especially in the area of housing) in the urban environment may have led to a greater understanding of the common necessity of two-salary families. The relatively low level of awareness of rural educators of the particular financial struggles of female single parents may be part of the general lack of knowledge of the economic disparities of females and males in general.

Lipman-Blumen (1972) investigated the sex-role attitudes of the wives of graduate students. She found no significant differences between rural subjects and those in urban or suburban areas.

**Marital Status.** There were no significant differences

between the respondents in the three categories of marital status (single, married, previously married) on the entire questionnaire or either of the four subscales. This finding did not correspond to that of Welch (1975) who found that women who had never been married were more supportive of women's rights than those who had been or were married.

The 10 items from the entire questionnaire with the highest item means were all from the Sexual Equality category. The 10 item mean scores ranged from a low of 4.432 to a high of 4.825. It was apparent that educators had a highly egalitarian attitude toward the general principle of sexual equality in education and the workplace.

All four items in the Information/Knowledge category were in the 10 lowest ranked items. This indicates a relatively low level of information or knowledge about the economic disparity between females and males. One may speculate that this lack of information may be a factor in influencing sex-role attitudes. Educators may not readily endorse changes in the career roles of women if they do not perceive that there are inequalities in the traditional sex segregation of occupations. For example, only 37% of the respondents knew that the average earnings of males are substantially higher than the average earnings of females, even among those wage earners with similar educational levels (item #32). Most surprisingly, only 53.4% of these educators knew that females constitute the majority of high

school and college graduates (item #36). The lack of information of the educators may be partly due to the fact that they work in an education system that, although characterised by a gender imbalance in certain areas (high school and administrative positions), does not discriminate directly in the area of salary scale. Educators with similar education and experience levels earn about the same (allowing for salary differences based on specialist and administrative bonuses). The respondents may have tended to generalize their economic situation in this regard to society at large.

Three items from the Nontraditional category were among the ten items. One item (#24) was related to the suitability of women in blue-collar jobs, another (#42) was concerned with the perception of barriers to women entering nontraditional occupations and the third (#21) dealt with the need for more female teachers at the high school level. Many educators probably feel that, even with advancements in technology, the physical demands of jobs such as auto mechanic and plumber may be beyond the capabilities of the average female. The perception that unsuitability is the reason for females' relatively low participation in nontraditional occupations is a fairly narrow view. It fails to take into consideration the social influences that may be discouraging females from such a career decision, the discriminatory hiring practices of some employers or the

possibility of negative attitudes on the part of male employees and others who tend to resist such a change. The relative lack of support for the last item was an interesting result from a group of educators. Only 60% of the respondents answered "agree" or "strongly agree" to the idea of changing the gender imbalance at the high school level. This may be due to a general reluctance to adjust to a major change in the workplace and a comfort with the status quo. The reason for this resistance to change may also be more specific: many educators may believe that males are more capable of coping with discipline of students at the high school level.

Three items from the Dual Role category were among the lowest-ranked items. The respondents appeared to be undecided about the effects of married women working outside the home and whether or not employers should make accommodations for the domestic responsibilities of working mothers. There was also a relatively low level of support for mothers working outside the home when their children were young. The attitudes of the educators toward the employment of wives and mothers outside the home, although moderately egalitarian, were somewhat less favourable than the highly positive endorsement of sexual equality in principle. Attitudes toward the involvement of wives and mothers in the paid workforce may be affected by beliefs about the domestic responsibilities and roles of women.

Because of cultural expectations of women's domestic role and the problems inherent in combining family responsibilities with career demands, it is not surprising that educators, like many others in our society, may have ambivalent feelings about the compatibility of the dual roles.

The results also suggest that statements which deal with broad generalizations and principles (such as those in the Sexual Equality category) are more likely to elicit egalitarian responses than are statements which deal with more specific aspects of sexual equality (such as those in the Dual Role, Nontraditional, and Information/Knowledge categories). In other words, people may display selective support and heartily endorse sex-role issues on a general, global level but show less positive, more ambivalent feelings in more specific areas.

Educators, as significant others in young people's lives, have an influence on students' educational and career decisions. An examination of the attitudes of school personnel toward the changing work patterns of women may contribute to an understanding of the particular influences they exert on female students. Subgroups, such as male or relatively older educators as well as those in rural areas, may be identified as possible target groups for inservice education on the special needs of females in career education. A deeper appreciation of the impact of sex-role

expectations, future dual role responsibilities and the barriers to participation in nontraditional occupations may lead educators to a stronger commitment to developing the potential of female students.

### Limitations of the Study

1. Because it is less acceptable in today's society to admit to sexual stereotyping, many people may conceal negative attitudes toward such issues as nontraditional occupations or working mothers when asked about them directly, which is usually the case in attitude assessment (Haring and Beyard-Tyler, 1984). An overly optimistic picture of the status quo may emerge. Subjects may be reluctant to express their opinions honestly. This may be a significant drawback in the sample of educators who may be more sophisticated than the general population in their awareness of the unacceptability of gender bias, especially in the educational system.

2. There may be a differentiation between attitudes and behavior. Even if the data represents a valid assessment of the subjects' stated beliefs, the professed attitudes may not be an adequate reflection of their behaviors. They may agree with sexual equality in principle but not in practice.

3. The questionnaires were piloted with a sample of 37 teachers enrolled in an education course at Memorial

University of Newfoundland during the 1990 summer session. The members of this group were similar in the respect that all of them had chosen to continue their university studies during the summer vacation. Whether or not they were representative of the sample of 287 teachers in this study is not known.

4. Five hundred questionnaires were sent to the twenty schools which participated in the study. The exact number of possible subjects was 496. A total of 287 questionnaires was returned to the researcher (a rate of 57.9%). It cannot be determined if there were any factors or characteristics which differentiated between those who participated and those who did not; consequently, it is not known whether the results would have been significantly different if all members of the school staffs had participated.

5. The exact conditions under which each of the subjects completed the questionnaires are not known. Some principals set aside time during staff meetings to enable their staff members to fill out the questionnaires. Other principals passed out the questionnaires during staff meetings and requested that staff members complete them on their own time. Information from each respondent was therefore not gathered in the same manner. The effects of this lack of standardization in gathering data for the study are not known.



6. In the questionnaire, terms denoting female gender were placed before terms denoting male gender in 34 of the 44 items. It is not known whether or not this sexist bias influenced the responses of the educators.

7. The validity of the questionnaire in measuring attitudes toward the changing career patterns of women is uncertain since it has not been administered to groups who would be expected to score at significantly different levels (eg. members of feminist groups contrasted with those in groups which disagree with the ideology of the women's movement). There is no indication how other groups would score so there is no sample with which teachers may be compared. There might have been a sexist bias inherent in the questionnaire items which could possibly have affected the scores of the sample of educators.

### Recommendations

Recommendations arising from this study are as follows:

1. Research should be conducted with samples of high school students in order to assess their attitudes toward career-related aspects of women's role in society. It is important to determine whether intervention programs may be needed to counteract present beliefs which may be inhibiting career choices for females.

2. Further research should be conducted with a larger sample of administrators and guidance counsellors to more

accurately determine their attitudes toward career-related aspects of women's changing role in society. This is especially important in the case of guidance counsellors who have the most direct influence on young people's career choices in counselling programs. Additional research into the attitudes of educators in general is recommended. Examination of attitudes of other groups besides school personnel would allow comparison of educators' attitudes to those of the general population.

3. More research should be conducted on the apparent lack of knowledge among educators about the financial ramifications of women choosing from a narrow range of traditional occupations. This is especially crucial in the case of guidance counsellors who are expected to be knowledgeable about the world of work and the special career counselling needs of females.

4. Because of the strong influence of educators (especially males) on female students, school boards should make an effort to develop in-service programs for their school personnel with the objective of educating them about the inequalities inherent in the sex-segregation of occupations. This is especially important for teachers at the high school level, where many students are making career decisions.

5. Educators at all levels should be encouraged, through in-service programs, to recognize and evaluate their

attitudes and biases in regard to women's roles in society and to provide for their students a learning environment free from sex-stereotyping. In particular, teachers need to make direct efforts to improve students' attitudes, particularly those of females, toward science and science-related careers. This is especially crucial at the primary and elementary levels, where students' attitudes about sex roles are developing.

6. Institutions where teachers, guidance counsellors and administrators receive their university degrees should take more responsibility for educating these people about the negative effects of sex-stereotyping and for encouraging them to examine their own attitudes and biases.

7. Occupational segregation will have to be fought on two fronts, for males will also need to be encouraged to enter occupations nontraditional for their gender (Hayes, 1986). Research on the attitudes of educators, as well as other groups, toward this trend is recommended. The special needs of male students who may consider nontraditional occupations will have to be addressed.

The maintenance of occupational segregation involves factors that are environmental, societal and structural (eg. discrimination by employers, shortage of child care facilities, difficulties with maternity leave, sexual harassment). Women may be reluctant to enter nontraditional

occupations because of a realistic awareness of problems that may be encountered (Clement, 1987). Implementation of changes to improve the occupational status of females in our society will succeed only if people, especially those in positions of influence and power, have positive attitudes toward the concept. If people do not recognize the need for change, attempts to alter the status quo will meet with resistance even in the face of such measures as employment equity legislation. Concerns related to sexual equality in all aspects of life are part of a broader commitment to social justice for all members of society. In terms of a career development perspective, the ideal of developing human potential to its fullest is a central concept of a "philosophy that supports the right of both sexes to pursue occupations on the basis of individual abilities, interests, values and goals rather than on the basis of culturally established and socially maintained sex roles and stereotypes" (Hayes, 1986, p. 89).

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APPENDIX A  
Sources Used in the Development  
of the Questionnaire

**Sources Used in the Development of the Questionnaire**

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**APPENDIX B**  
**Questionnaire -**  
**Aspects of the Changing Role**  
**of Women in Society**  
**and**  
**Final Breakdown of the Four Subscales**

**Questionnaire:****Aspects of the Changing Role of Women in Society**

I am conducting this questionnaire as part of the requirements for a M.Ed. degree in Educational Psychology at Memorial University of Newfoundland. I would appreciate it very much if you would answer all of the items in both sections. Participation, of course, is voluntary and the replies will be completely confidential. It is not necessary to identify yourself because only the data included will be used in the study.

**i. Please complete the following personal information:**

Age: \_\_\_\_

Sex: \_\_\_\_

Marital Status: Single \_\_\_\_

Married \_\_\_\_

Widowed \_\_\_\_

Separated \_\_\_\_

Divorced \_\_\_\_

Other (specify) \_\_\_\_

Job Description: Classroom Teacher \_\_\_\_

Resource Teacher \_\_\_\_

Guidance Counsellor \_\_\_\_

Administrator \_\_\_\_

Other (specify) \_\_\_\_\_

Teaching Certificate or Grade: \_\_\_\_\_

Number of Years Teaching Experience: \_\_\_\_

Grade Levels of Children You Deal With Most:

(if evenly divided, check more than one)

Primary	___
Elementary	___
Junior High	___
Senior High	___
All Levels	___

**II. Please indicate your degree of agreement or disagreement with the following statements by circling the appropriate number:**

- |  | (1)               | (2)      | (3)       | (4)   | (5)            |
|--|-------------------|----------|-----------|-------|----------------|
|  | Strongly Disagree | Disagree | Undecided | Agree | Strongly Agree |
| 1. When both the husband and wife work outside the home, the husband should be expected to do as much housework as the wife.   |                   |          |           |       | 1 2 3 4 5      |
| 2. Male principals are more effective administrators than female principals.   |                   |          |           |       | 1 2 3 4 5      |
| 3. Female students should be encouraged as much as male students to take academic or advanced mathematics courses.   |                   |          |           |       | 1 2 3 4 5      |
| 4. Working mothers can do justice to both home and career responsibilities.  |                   |          |           |       | 1 2 3 4 5      |
| 5. If a female plans to be a full-time homemaker, it is not as important for her to obtain post-secondary education or training as it is for one who intends to work outside the home. |                   |          |           |       | 1 2 3 4 5      |
| 6. Women tend to react emotionally in crisis situations and men usually respond with logical thinking.   |                   |          |           |       | 1 2 3 4 5      |
| 7. A married woman who has preschool-age children should not be criticized for working outside the home simply because she wishes to.  |                   |          |           |       | 1 2 3 4 5      |



	(1)	(2)	(3)	(4)	(5)
	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
8.	Girls should be given as much encouragement as boys to go to college or university.				1 2 3 4 5
9.	Many emotional and adjustment problems in children develop because of mothers working outside the home.				1 2 3 4 5
10.	Boys are naturally more capable than girls of handling science and mathematics courses.				1 2 3 4 5
11.	A woman who works full-time outside the home can be just as good a mother to her children as one who stays at home.				1 2 3 4 5
12.	A female should get only enough education and training in order to obtain a job to fall back on in case she doesn't get married.				1 2 3 4 5
13.	Generally speaking, women are capable of performing as well as men in all areas of the paid workforce.				1 2 3 4 5
14.	Mathematics and science courses are not as important for female students as for male students because males need them more often for the types of careers they enter.				1 2 3 4 5
15.	There should be more females in administrative positions at school board level.				1 2 3 4 5
16.	Women's salaries have increased substantially in recent years and they have little reason to complain about gender differences in wages.				1 2 3 4 5
17.	Most women who work at jobs such as carpenter or truck driver are unfeminine.				1 2 3 4 5
18.	Women are just as suited to leadership positions as men.				1 2 3 4 5

	(1)	(2)	(3)	(4)	(5)
	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
19. Female students should be encouraged as much as male students to take physics courses.					1 2 3 4 5
20. The employment of women outside the home has had a negative effect on the institution of the family.					1 2 3 4 5
21. There should be more female teachers at the high school level.					1 2 3 4 5
22. Post-secondary training and education of females are often a waste of resources because many of them do not stay full-time in the workforce after they have children.					1 2 3 4 5
23. Mothers of children under three years old should not work outside the home unless it is financially necessary.					1 2 3 4 5
24. Most women are physically able to handle blue-collar jobs such as auto mechanic or plumber.					1 2 3 4 5
25. Women do not need as high an educational level as men because they can depend on their husbands to support them and their families.					1 2 3 4 5
26. Males and females who perform similar job duties should be paid equally.					1 2 3 4 5
27. A woman with preschool or school-aged children cannot realistically have the time or resources to develop a long-term career outside the home.					1 2 3 4 5
28. Physics courses should be taken by more girls than are considering them today.					1 2 3 4 5
29. A woman's major role in life should be that of homemaker.					1 2 3 4 5

	(1)	(2)	(3)	(4)	(5)
	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
30. Females should be encouraged to become actively involved in getting elected to political positions at the provincial and federal levels.					1 2 3 4 5
31. It is realistic to expect women to earn less than men because most women are married to men who already earn a salary.					1 2 3 4 5
32. Generally speaking, men and women with equal education levels who work full-time earn similar salaries.					1 2 3 4 5
33. A female principal would be more suitable for a primary or elementary school than for a high school.					1 2 3 4 5
34. The majority of women in paid employment work because of financial necessity.					1 2 3 4 5
35. School personnel should take an active role in encouraging female students to enter traditionally male occupations such as engineering.					1 2 3 4 5
36. Women do not generally make as much money as men because fewer of them graduate from high school or college.					1 2 3 4 5
37. There should be more daycare centres to help working parents deal with the responsibility of caring for their young children.					1 2 3 4 5
38. Very few women have the mixture of ability and assertiveness needed to compete in high pressure areas such as politics and business.					1 2 3 4 5
39. Married women should not work outside the home if they have young children.					1 2 3 4 5
40. Females should be encouraged to aspire to professional and business occupations that have traditionally been held by males.					1 2 3 4 5

	(1)	(2)	(3)	(4)	(5)
	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
41. Promotions and job appointments should be based on merit alone, without regard to gender.					1 2 3 4 5
42. Most jobs are now open to males and females so if women fail to obtain jobs that were traditionally male occupations it is because they are not suitable for these positions.					1 2 3 4 5
43. Employers should make it easier for working mothers by offering more part-time employment and more flexible working hours.					1 2 3 4 5
44. Generally speaking, female single parents are as financially well off as male single parents.					1 2 3 4 5

### **Breakdown of the Four Subscales**

The final breakdown of the four subscales in the questionnaire was as follows:

#### **I. Sexual Equality**

3. Female students should be encouraged as much as male students to take academic or advanced mathematics courses.
5. If a female plans to be a full-time homemaker, it is not as important for her to obtain post-secondary education or training as it is for one who intends to work outside the home.
6. Women tend to react emotionally in crisis situations and men usually respond with logical thinking.
8. Girls should be given as much encouragement as boys to go to college or university.
10. Boys are naturally more capable than girls of handling science and mathematics courses.
12. A female should get only enough education and training in order to obtain a job to fall back on in case she doesn't get married.
14. Mathematics and science courses are not as important for female students as for male students because males need them more often for the types of careers they enter.
19. Female students should be encouraged as much as male students to take physics courses.
22. Post-secondary training and education of females are often a waste of resources because many of them do not stay full-time in the workforce after they have children.
25. Women do not need as high an education level as men because they can depend on their husbands to support them and their families.
26. Males and females who perform similar job duties should be paid equally.
28. Physics courses should be taken by more girls than are considering them today.
31. It is realistic to expect women to earn less than men because most

women are married to men who already earn a salary.

41. Promotions and job appointments should be based on merit alone, without regard to gender.

## **II. Dual Role**

1. When both the husband and wife work outside the home, the husband should be expected to do as much housework as the wife.

4. Working mothers can do justice to both home and career responsibilities.

7. A married woman who has preschool-age children should not be criticized for working outside the home simply because she wishes to.

9. Many emotional and adjustment problems in children develop because of mothers working outside the home.

11. A woman who works full-time outside the home can be just as good a mother to her children as one who stays at home.

20. The employment of women outside the home has had a negative effect on the institution of the family.

23. Mothers of children under 3 years old should not work outside the home unless it is financially necessary.

27. A woman with preschool or school-aged children cannot realistically have the time or resources to develop a long-term career outside the home.

29. A woman's major role in life should be that of homemaker.

37. There should be more daycare centres to help working parents deal with the responsibility of caring for their young children.

39. Married women should not work outside the home if they have young children.

43. Employers should make it easier for working mothers by offering more part-time employment and more flexible working hours.

## **III. Nontraditional**

2. Male principals are more effective administrators than female principals.

13. Generally speaking, women are capable of performing as well as men in

all areas of the paid workforce.

15. There should be more females in administrative positions at school board level.
17. Most women who work at jobs such as carpenter or truck driver are unfeminine.
18. Women are just as suited to leadership positions as men.
21. There should be more female teachers at the high school level.
24. Most women are physically able to handle blue-collar jobs such as auto mechanic or plumber.
30. Females should be encouraged to become actively involved in getting elected to political positions at the provincial and federal levels.
33. A female principal would be more suitable for a primary or elementary school than for a high school.
35. School personnel should take an active role in encouraging female students to enter traditionally male occupations such as engineering.
38. Very few women have the mixture of ability and assertiveness needed to compete in high pressure areas such as politics and business.
40. Females should be encouraged to aspire to professional and business occupations that have traditionally been held by males.
42. Most jobs are now open to males and females so if women fail to obtain jobs that were traditionally male occupations it is because they are not suitable for these positions.

#### **IV. Information/Knowledge**

16. Women's salaries have increased substantially in recent years and they have little reason to complain about gender differences in wages.
32. Generally speaking, men and women with equal education levels who work full-time earn similar salaries.
34. The majority of women in paid employment work because of financial necessity.
36. Women do not generally make as much money as men because fewer of them graduate from high school or college.

44. Generally speaking, female single parents are as financially well off as male single parents.



**APPENDIX C****Letter to Superintendent**

Apt. 304  
124 Terra Nova Road  
St. John's, NF  
A1B 1G2

August 10, 1990

Mr. William C. Lee  
Superintendent  
Avalon Consolidated Integrated  
School Board  
P.O. Box 1980  
87 LeMarchant Road  
St. John's, NF  
A1C 5R5

Dear Mr. Lee:

I am presently working on my thesis as part of the requirements for a M.Ed. degree in Educational Psychology at Memorial University of Newfoundland. I am conducting a study into teachers' attitudes towards various aspects of the changing role of females in society. I respectfully request your permission to allow me to contact the principals in your school board for the purpose of administering a questionnaire to the teaching staff in their schools. I understand that, even with your permission, the participation of principals and teachers will be voluntary.

Please accept my thanks in advance for your time and consideration. If you have any questions about this study, you can contact me at the address above or by phone at 754-5255 (collect).

Yours truly,

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Graduate Student

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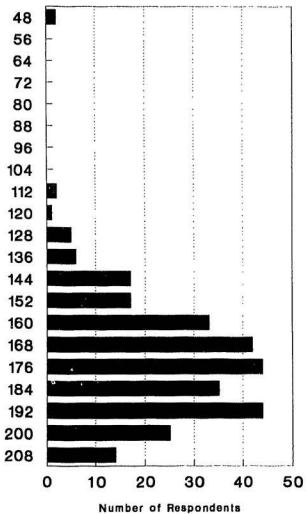
Supervisor of Thesis

Encl.: Copy of Questionnaire

**APPENDIX D****Frequency Distributions of Entire Scale  
and Four Subscales**

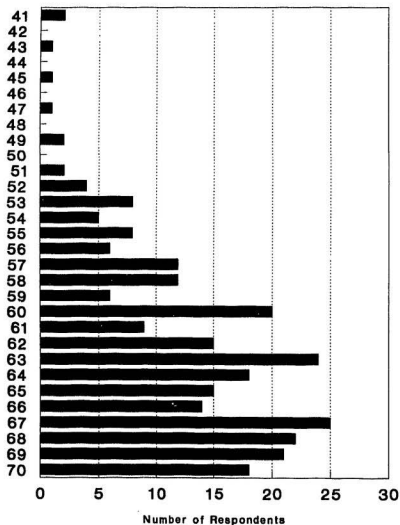
## Frequency Distribution of Scores on Entire Scale

Midpoints of  
Raw Score Range



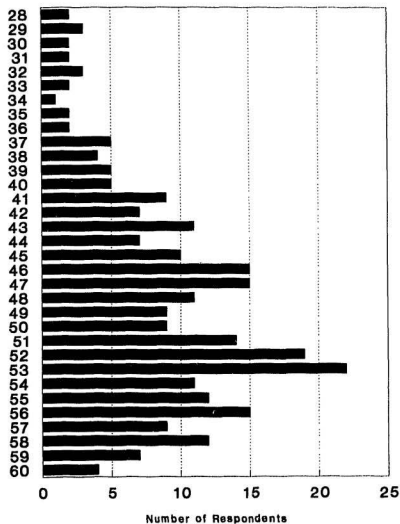
# Frequency Distribution of Sexual Equality Subscale Scores

Scale Scores



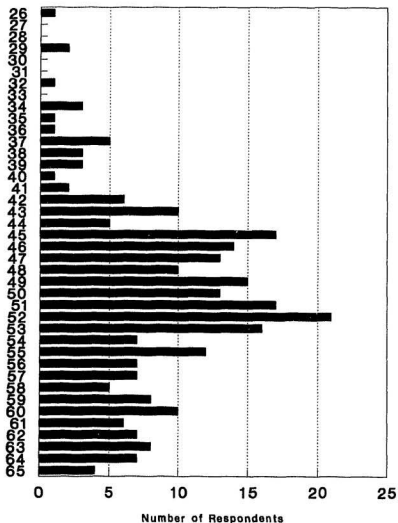
# Frequency Distribution of Dual Role Subscale Scores

Scale Scores



# Frequency Distribution of Nontraditional Subscale Scores

Scale Scores



# Frequency Distribution of Information/Knowledge Subscale Scores

Scale Scores

