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The relationships of females' sex-appropriate occupational choices, work commitment, and organizational commitment to selected demographic variables

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**THE RELATIONSHIPS OF FEMALES' SEX-APPROPRIATE OCCUPATIONAL
CHOICES, WORK COMMITMENT, AND ORGANIZATIONAL COMMITMENT TO
SELECTED DEMOGRAPHIC VARIABLES**

Iowa State University

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**The relationships of females' sex-appropriate occupational choices,
work commitment, and organizational commitment
to selected demographic variables**

by

Trisha Steiner

**A Dissertation Submitted to the
Graduate Faculty in Partial Fulfillment of the
Requirements for the Degree of
DOCTOR OF PHILOSOPHY**

**Department: Professional Studies in Education
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Signature was redacted for privacy.

In Charge of Major Work

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For the Major Department

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**Iowa State University
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1986

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INTRODUCTION

Significance of the Problem

The current women's movement has produced changes in social structures, concepts and attitudes, economic structures and political forces. These changes are evident through all areas of our society and have resulted in changes in expectations for and from females, as well as the resistance to these changes by both males and females.

Changes which have been occurring throughout the past decade include the widespread movement of females into areas of work which have been generally considered closed to their participation. The implication is that more females are now taking part in the work force in "male" positions.

Today females are able to consider realistically a wider range of occupations and career options as being appropriate and rewarding. At this point, it is no longer a question of whether females should work, but how this movement will restructure the family, self-concept, and both male and female sex roles.

For a female in the American culture, there have been several changes in the expected roles over the past decades. The increasing expectations and responsibilities of both the homemaking and wage earner roles, may result in the female being less willing to subject herself to male domination and decision-making, and be less willing to view various family obligations as of primary importance (Ehrenreich & English, 1979; Rothman, 1978). When paid employment is a part of a female's life, role

conflict or stress is also a possibility.

Currently, there is evidence that traditionally sex-typed females are restricting their roles and behaviors according to the traditional beliefs that they are not as seriously involved with work and will neither be as productive or reliable as males (Bem, 1981; Marcus et al., 1982). In particular, feminine sex-typed females may interpret information about careers in the light of pre-existing beliefs, and in this selective manner unconsciously eliminate alternatives and nontraditional options.

"Women's work" means activities done by females from which males are excluded or are found in very small numbers and which usually are perceived by the general public as females' work. "Men's work" likewise is that from which females are excluded. To understand work as being "men's work" or "women's work" it is necessary to consider the female's role in the family and society. The relationship between sex differences and the division of labor is complicated. Biological limits such as physical strength may influence various activities but cannot account for the "inability" of females to do "men's work" and vice versa.

If females were distributed proportionately within occupations as they are in the labor force as a whole, each occupation would have approximately 40% participation by females. In reality, 98% of the office workers and private household workers 97% of registered nurses, 92% of the dietitians, 89% of the waiters/waitresses, and 85% of the elementary teachers are females. Most wage earning females are likely to be in categories in which 80% or more are females. On the other

hand, only 4% of craft workers are females.

When females are found in the professional and technical occupations, they are at the lower end of the prestige scale. For example, when a female is a doctor she is less likely to be a surgeon, when an engineer she is less likely to be a design engineer in charge of production, and when a lawyer, she is less likely to be a private attorney. Even among the sales occupations there is a distinct dichotomy. Females sell clothing and notions and males sell cars and stocks (Fuchs, 1975).

It may appear, looking back from the 1980s that the females' movement has aided in extending jobs and job levels of positions open to females in a steady progression of increasing equality. Actually, social expectations vary from decade to decade, with progress being discontinuous. In 1940, 45% of the technical and professional positions in this country were held by females. By 1968, the proportion of females in these occupations had declined to 35% (Kessler-Harris, 1982).

The value of females' work is related to the expectation that housework and caring for people is their natural, unpaid activity. In the work world, females clean offices, wait on tables, nurse, teach, and provide personal services. With the expectation of unpaid work in this category, a female is relegated to low status and low paying jobs.

She is further restricted by the difficulty in maintaining many schedules which are usually demanded of the worker. It is expected that she will be at home for the return of schoolchildren and prepare evening meals. This eliminates consideration for many higher positions since

they often require more time.

Both age and family responsibilities contribute to the pay difference between married males and married females and to the increasing gap between their salaries. Females receive an average of 80% of the pay males of the same age when under 25 years of age. Comparison of pay levels between never-married and married females shows that the differences in salary between these two groups increase with age. Never-married females, whose family responsibilities would be no greater than males, still are working at 80% of male salary levels at the age of 35 while the ratio for married females has dropped to 60%. This percentage for married females continues to drop with increasing age. Married females may have fewer opportunities at an earlier age for career advancement and fewer annual pay increases due to discontinuity in employment. This may account for some of the growing differences between their salaries and those of single females and males (Jusenius, 1977).

These income differences are partially due to public perception of what females can do as well as their own ideas of what is possible. Perceptions of female wage earners are based in part upon ideas of females' intermittent career patterns due to childbearing. Females are seen as having higher turnover rates and higher absenteeism due to pregnancy, illness, and family responsibilities. Actually, when the turnover and absenteeism rates are examined and controlled for income, there is very little difference in the rate between females and males. A more accurate statement is that persons making marginal salaries tend

to have a higher rate of absenteeism and turnover, whether they are male or female wage earners (Kaufman & Feters, 1980).

Research Question

This research project attempts to answer questions concerning female sex-appropriate choices, work commitment and organizational commitment as they relate to the following variables: residency, age, education, role stress, sex-role perception, risk-taking characteristics, marital status, number and ages of children, and job level.

Hypotheses

In the present study, three major hypotheses were developed. Twenty-six specific hypotheses were developed to be tested. The hypotheses dealt with relationships between females' occupational choice, work commitment, organizational commitment, and eight demographic, situational and attitudinal variables.

Hypothesis 1. Females' choice of career as described in terms of traditional, neuter, and nontraditional choices does not relate to the following variables, either singly or as a set.

- (a) residency
- (b) age
- (c) education
- (d) role stress
- (e) marital status
- (f) sex-role perception
- (g) risk-taking characteristics
- (h) children
- (i) job level

Hypothesis 2. Females' work commitment does not relate to the following variables, either singly or as a set.

- (a) residency
- (b) age
- (c) education
- (d) role stress
- (e) marital status
- (f) sex-role perception
- (g) risk-taking characteristics
- (h) children
- (i) job level

Hypothesis 3. Females' organizational commitment does not relate to the following variables, either singly or as a set.

- (a) residency
- (b) age
- (c) education
- (d) role stress
- (e) marital status
- (f) sex-role perception
- (g) risk-taking characteristics
- (h) children
- (i) job level

Subhypotheses are listed in Appendix B.

Definitions

For this study, the following definitions are used:

Career: Career is defined as the sequence of paid or nonpaid positions occupied by individuals throughout the course of their lifetime (Super, 1976).

Career development: Career development is defined as the total constellation of psychological, social, educational, physical, economical and chance factors that combine to shape the career of any given individual including choice, entry, and direction

(Osipow, 1968).

Role stress: Role stress is defined as a system of forces defined by a role which results in distress for the individual in the course of carrying out that role behavior (Berkowitz, 1980). It was assessed by a subjective statement from the respondents.

Risk characteristics: Three scales of the 16 Personality Factors inventory assessed the characteristics of a) dominance, b) bold-adventurous, and c) liberality (Krug, 1980).

Work commitment: Work commitment is the degree to which a person develops identity through work and the qualitative and quantitative participation in that work. It was assessed by a work attitudes measure (Lodahl & Kejner, 1965).

Organizational commitment: Organizational commitment is defined as the degree to which a person is affected by the entire job situation. It was assessed by a measure of organizational commitment (Cook & Wall, 1980).

Job level: Job level is defined as the education or training generally required to gain and maintain a position. The descriptive categories correspond to those describing education.

Limitations

This study was subject to many of the limitations which are inherent in the use of questionnaires. Lack of personal contact and inability to tailor questions to the situation and understanding of the individual respondents result in an approximation of information.

Survey research does not permit the direct measurement of behavior, although social behavior is frequently the focus of survey research. Survey research does permit the indirect measurement of behavior. This is particularly relevant when working with theoretical concepts which seldom if ever permit unambiguous operationalization. Because these concepts are abstract and general, every specific empirical indicator is an approximation. "Ultimately, we use approximate indicators of theoretical concepts to discover partial associations" (Babbie, 1973).

LITERATURE REVIEW

The role of females in the work force reflects both social and economic changes in our society, and in turn this role affects the development of our economy and social structure.

During the twentieth century, individual productive labor has increased dramatically. Areas which have particularly expanded are those of the service sector, which includes white collar workers in office, sales, health, and educational fields. The growth of these areas has created a demand for additional labor which has been met by an increase in percentage of females in the work force, and in particular, of married females.

The increase of numbers of service jobs has been associated with the identification of these fields as "feminine," with low status and pay, and generally, lower educational requirements. The increased numbers of females in the work force has brought about an increase in research about the working mother and the reentry female. Choice of occupation and work attitudes have been examined in connection with educational preparation, sex-role perception, multiple roles, and role stress.

The difficulties of multiple roles, reentering the work force in competition with youthful workers, social pressures against working, working in nontraditional occupations, the covert and overt exclusion from work groups, advancement, and recognition, are all receiving more attention by researchers and are reviewed in this chapter. The review of literature addresses each of these areas.

The specific factors involved in this study are presented with a brief overview of theories which relate to work and individual development. First, age and stage development in relation to females' work life is examined. Following that, the areas of sex-role perception, role stress, choice of occupation, work commitment, organizational commitment, and risk-taking characteristics are examined in turn.

Theory

There has been considerable discussion about developing separate theories for the choice and development of females' careers. Existing theoretical models which have been used as a basis for this study include a) vocational choice theories, b) human development theories, and c) trait-factor theories. Basic concepts of these theories and their possible relationship to vocational theories for females will be examined.

The vocational choice theories focus on the decision-making process which assesses the opportunities, the degree of effort needed to accomplish a chosen job, and the probable outcomes. The human developmental theories describe this process as being related to the age and stage of an individual, and mostly focus on male development in adulthood. The trait-and-factor theories focus on personal characteristics as an explanation of vocational behavior. None of the theorists has developed adequate models for females and some specific problems of application of the present models have been noted.

Some theorists believe that the central role of females will remain that of homemaker and outside employment is a secondary consideration. Osipow (1975) and Zytowski (1969) both thought that the rapidly changing status of females foreclosed the usefulness of developing a special vocational theory for females. It appears that the simultaneous roles of homemaker and employee are carried on simultaneously for many females and this may soon describe most females.

Age and Developmental Stage

Developmental theories

The developmental approach to careers is based on the work of Havinghurst (1953), who related task development with career stages, and others, and extends through the work of Super (1977). The developmental view is based upon Havinghurst's definition:

"A task which arises at or about a certain period in the life of the individual, successful achievement of which leads to happiness and success with later tasks, while failure leads to unhappiness in the individual, disapproval by society, and difficulty with later tasks" (Havinghurst, 1953, p. 2).

In this approach, a career is seen as a continuum from initial search and exploration, through commitment and involvement to the exclusion or lessening of social influences and commitments. Hall and Nougaim (1968) describe a mid-life crisis presupposes a decrease in work commitment and an increase in family and community life. This mid-life crisis is described as an awareness that initial career goals will not be met. This period also reflects an androgenous development of personality which affects values placed on work, achievement and goal

setting. Beyond this crisis, a reorientation takes place during which adjusted goals are set and careers may be changed to fit new lifestyles.

Erikson (1959) lists eight basic life stages beginning with childhood and adolescence and extending through an individual's lifetime. Adolescents may exhibit role confusion resulting from a lack of occupational clarity. The adult stage is one of intimacy, defined as the development of personal and organizational relationships. Later, at fifty-five years of age and later, there are stages of regenerativity in which one seeks to create something of lasting value and which often includes the development of new areas within work as well as development of ego integrity.

Super (1977) outlines nine roles: child, student, user of leisure time, citizen, worker, spouse, homemaker, parent, and pensioner. Generally, these take place in three theaters of activity: that of home, community, and school or work place. The number and type of roles determine an individual's lifestyle. Since they commonly hold multiple roles described here, this idea is particularly apt for females.

Progress has been made toward describing females' relationship with work; but, of the major theorists, only Super et al. (1957) have made a serious attempt to classify female career patterns (Fitzgerald & Crites, 1980). Essentially Super (1977) describes perceived patterns and does not give a causal explanation of career behaviors of females.

The developmental stages as described by Super (1977) may fail to describe females' development accurately. Those five stages are

outlined as follows: childhood, adolescence, the establishment of a career between the ages of 25 and 44, the maintenance of career from 45 to 65 and retirement. This is somewhat similar to Erikson's outline of stages but there is more of a flattening out and status quo orientation (Super et al., 1957).

For females, differences may begin with socialization as children and development of goals as students. Expectations for girls are frequently the reverse of those assumed since our ideas are built around male development. During the adolescent period, the usual searching and decision-making may be a pseudoactivity preceding the actual and often unspoken goal of marriage (Ginzberg, 1971).

Significant vocational development may occur later, when the major duties of child raising have been completed. Choice and development of occupation may be complicated for females by a perceived split in the role demands of homemaker and worker, resulting in frustration and conflict. Furthermore, her unique position as holder of most of these roles simultaneously creates a very complex set of problems. Thus, the career establishment and maintenance stages are often correspondingly delayed, and options and opportunities may never exist in the same way they would for males (Osipow, 1975).

Hall and Nougaim (1968) describe three career stages:

1) establishment, 2) advancement, and 3) maintenance. High performers go through the establishment and advancement phases most quickly, learning role tasks with a view towards security and maintenance. Stages are also described in terms of specific ages which are: 20 to 29

years of age to begin development of a career, 30 to 44 for settling in, and 45 to 49 for a "reaching out" period.

Erikson (1959) and Bem (1974) describe the androgenous behavior of older workers based upon developmental theory. Sex-role characteristics tend to become less rigid and other-sex attributes more acceptable. This behavior tends to be an asset because certain positive characteristics, such as flexibility, empathy and other adaptive behaviors, the ability to cope with conflicting demands and to manage stressful situations increase. This is important to both employer and worker.

Studies also show that females are less oriented to retirement than males. Both females and males are reluctant to lose extrinsic rewards but females are particularly reluctant to lose work when it includes social ties (Daton & Lohmann, 1980).

The possibility of the pattern for females' careers as being established later, but following the same general expectations of intense work during the establishment phase and similar periods of advancement and maintenance combined with decreased interest in retirement, may be important to the older reentry woman and to her employer.

Transitions Levinson et al. (1978) have extended the models of Havinghurst, Ginzberg et al., and Super, by describing turning points of periods of change between developmental stages. He points out periods of stability within a stage and transitions which may be times of crisis. As with most aspects of career development, these ideas are based on work with male career patterns and experiences. However, this

is particularly relevant to females, since they experience discontinuity in careers, are strongly impacted by changes in the family structure and are more apt to have career changes later in life. Hall and Nougaim's (1968) concept of midcareer crisis is that of a stagnating career with an associated loss of productivity, dissatisfaction and withdrawal as factors which correlate with this age. During the years 50 to 54, there is a settling down with a substantial attitudinal shift back to more stable perception of one's achievement. This is followed by 55+ which is "finishing up." This study was done with a population of 82% males and 18% females. The implication was that these females were career females (Entrekin & Everett, 1981).

Unique aspects of the transition period are dependent upon the inherent problems in transition, the specific characteristics of person, and the characteristics of the pre- and post-environments (Schlossberg, 1972).

This is relevant to the transition which females are subject to when moving into the work world from that of homemaker, particularly if an additional role, that of mother, is also changed by exiting children. The multiplicity of role changes and the social expectations of intense emotional reactions may explain some of the difficulty of transition.

Janis and Mann (1977) ask four questions representing transitions or turning points. First, are the risks serious if I don't change? Second, are the risks serious if I do change? Third, is it realistic to hope to find a better solution? And fourth, is there sufficient time to search and deliberate?

Many of these factors are quite different for females than for males, and although these various models may be useful as an outline for investigation of aspects of females' work, research is necessary to determine how this can be used to describe females experience.

The differences between males and females in work orientation, have not been clearly established between females and males. The human developmental, age, and stage studies which have described career development to date have described male careers, not female careers. The developmental process for females appears quite different than that of males due to various factors.

Career discontinuity When career patterns are discussed in the literature, it has been customary to talk of males' patterns, which assume uninterrupted development. For females, the development of a career as a steady progression over many years is not usual. The degree of difficulty experienced by females due to interruptions in career development has not yet been assessed. Females tend to look at work in the present tense, and may be reluctant to make long term goals (Schein, 1978).

Many females leave the workplace for a significant period of time when the demands of family increase. This is the result of the societal expectation which assigns homemaking and child-rearing tasks to females rather than males. Super et al. (1957) describe several patterns which females exhibit: females may work until they marry and then leave the work force, females leave the work force to meet the demands of her family but return, or females may show an unstable back-and-forth

pattern reflecting the degree of demands of family.

Females with high career motivation prior to marriage and the birth of children were observed to have a drop in measured motivation during the period when their children were young, but their motivation regained its former high level when these females viewed their children as no longer needing them full time in the home (Astin, 1976).

The changing career patterns of females have been brought about in part by the downward trend in the age range of working females throughout the twentieth century. At the beginning of this century, the majority of employed females were older; but as more females became wage earners, the average age has continuously dropped. For example, in the 1960s, females between 35 and 45 were the fastest growing age group of employed females, but in the 1970s the fastest growing group was between the ages of 25 and 35 (Snyder, 1979).

This downward trend in age has included younger wives and mothers. In the 1950s, 24% of all married females were working, but by 1975 the percentage had increased to 44%. In 1950, 21% of all mothers were employed. In the middle seventies, 51% of mothers with school age children were employed, and 34% were mothers with preschool age children (Kessler-Harris, 1982).

Results of discontinuity Because the majority of female employees now hold the role of mother as well as worker, differences in choice of career and timing of the various stages is affected. In particular, marriage plans have been found to have a moderating effect on the career motivation of females and influence motivation more than

that of males (Farmer & Fyans, 1983).

Career maturity One way of describing the pattern of career development over a period of time is that of career maturity. Super describes career maturity in the Career Pattern study (Super et al., 1957) as that place reached on the continuum of vocational development, which is described as beginning with career exploration and continuing through career decline.

The research describing vocational maturity shows females as having delayed development of the processes of vocational choice and development. Some females are described as vocationally 'immature' (Crites, 1961). The hypothesis is that females have not focused as much time and energy into aspects of career as males have and therefore the process is delayed, often until children have grown and they are re-entering the workplace.

Lunneborg (1978) on the other hand, believes that females generally have a high level of career maturity. Yet, even though attitudes toward their career choice process mature more rapidly than males, many females select occupations that are unrealistically low in terms of their capabilities and interests. Current measures of career maturity also do not take into consideration the variables which primarily affect females' vocational development, such as attitudes about marriage and children. If a measure is to be useful and valid in this area it must deal with the conflict about appropriate social roles.

A career may be considered a combination and sequence of roles during a persons lifetime. While these multiple roles may create

conflict, they also correlate with a richer and more satisfying life (Osipow, 1975; Super, 1981). Success in one role leads to success in another. With the experience of successful roles behind her, the older woman may look at careers, options and the risks involved quite differently than a younger woman. As the relative importance of various roles change across time, the degree of commitment may increase for older females. Chaubey (1974) did find that there is an effect of age on the expectancy of success and concomitant risk-taking behaviors.

Career stage is frequently correlated with age, and is indeed valid when describing male career patterns, as it is the exception rather than the rule for males to begin careers during the later decades of their lives. Not only do females tend to enter or reenter the work force at various times, but because of the multiple roles held by females, their career patterns will be very complex with numerous factors such as the expectations of spouse and community and the timing and number of children adding further important dimensions.

Role Perception

Trait-factor theories

Trait-factor approaches assume that vocational decisions are influenced by specific attributes, interests, and personality characteristics which can be assessed and used for prediction. Trait-factor approaches are used by some to explain how people evaluate choices, behavior, and achievement outcomes. These theories also tend to explain the development and effect of stereotypes affecting vocational behavior.

Weiner and Kukla (1970) describe effort and luck as variable events, but describe task difficulty as stable events. Deaux (1976) demonstrated the effects of sex of person being evaluated as partly determined by assumed attributions. Male success is due to ability while female success is due to luck. Male failure is attributed to lack of luck and female failure to lack of ability.

Stereotypical judgments which females hold about themselves reinforce this view. Females have lower expectations for themselves and when engaged in a task are more apt to quit when difficulties arise, attributing the difficulty to their own lack of ability. Males are seen as more apt to persist and make greater effort when difficulties arise, attributing the difficulty to the task itself.

Holland's classification system, which correlates specific traits to occupational choice is based on characteristics which are thought to be universal; but it has been noted that the characteristics associated with the realistic environment are assumed to be lacking in females (Fitzgerald & Crites, 1980). This classification is most common for persons with high need for achievement and general success. In viewing the specific adjectives used, it quickly becomes evident these terms are not compatible with the socially acceptable standards expected of females.

Much of the economical and social situation of females can be explained by the institutions, roles, norms, values, and the process of female socialization. In looking at the process of socialization of females, it becomes possible to understand why females are typically

placed in inferior roles and why this situation has continued. Once social patterns have become an integral part of social interaction, they are seen as correct, unalterable reality and based on something other than human production. Alternatives are not seen as feasible or acceptable. Our definitions of appropriate behavior protect us from chaos and instability, and threats to existing set of beliefs are not easily tolerated.

The early learning process as described by George Herbert Mead (1934) is first playing at a role and then adopting it as a view of self. Females are frequently more negative and ambivalent about themselves. There is an assumption that self-concept depends upon the man with whom she has a relationship, leaving self-concept in an ambiguous form for an extended period of time. This is reinforced by the decreased need to struggle for autonomy within the family and fear of rejection if assuming a position of achievement, competition, and aggression. With these stereotypical expectancies, barriers to employment are anticipated partly because of low evaluations of females as a social category and because of expectations girls develop about their role (Oakley, 1972).

Kohlberg (1966) contends that it is not direct shaping, reinforcement or modeling which leads to sex-role behavior but the construction of a concept of what is appropriate behavior for ones own sex. Lynn (1966) argues that girls have an easier time adopting the feminine role since their model is present, whereas boys must imitate an abstract idea of what they believe the males role to be. This

encourages boys to develop early problem solving skills.

In looking at social roles, sociologists ask questions such as what needs do the roles fulfill? What functions do they serve? What vested interests are involved? Deviance from established roles is generally punished or allowed only in certain circumstances. Roles mean that a certain set of expectations about conduct and attitudes has been established. These are most likely taken for granted and are so basic to the functioning of our society that alternative modes of conduct are not considered (Goode, 1960).

The female role as seen in our society and females' own concept of this role creates barriers. This role includes expectations of unpaid labor, menial tasks both in home and working world, and work which may be trivial or demeaning. Feelings of dependency may be fostered or even forced, and feelings of guilt about that dependency subsequently developed (Sheehy, 1974). Guilt may be fostered also by the frequent need to play games to survive, the deceitful and manipulative behavior which may be seen as necessary in the organization to balance the one-down positions in which females find themselves and for the lack of encouragement and support from their peers and employers.

Females also behave in a stereotypical manner in terms of expectations of what they can do and accomplish. When females are stereotyped as being flighty, emotional, sentimental, and unstable, then they are obviously unable to carry out important work in the world. Less destructive assumptions concerning femininity such as always being supportive and intuitive may decrease expectations of females both by

themselves and others. Females are seen as less adaptive, with excessive dependencies upon approval from others. Characteristics like assertiveness and independence which seem to predict the degree of work motivation are usually not attributed to females (Orlofsky & Stake, 1979; Bem, 1981).

Theoretical explanations of the differences in the sexual division of labor include that of females' childbearing and nurturing activities which tend to keep them sedentary and close to home and emphasize importance as food gatherers and preparers. These are secondary in importance to hunting in hunting societies where males needed to use weapons and physical power. Gough (1975) claims that the division of labor became institutionalized with the rise of a class society. Females became the property of their husbands and possessed no legal rights of their own. Firestone (1970) believes that nature introduced the inequality which was then institutionalized. French (1985) explains the origin of status and the development of a patriarchal system as a male need to have exclusive rights to his wife to ensure the legitimacy of his offspring.

Parsons (1951) explains the inequality of work roles by describing them as instrumental or task roles where the breadwinners make the decisions and have the authority. Females are then relegated by the task leader to provide emotional and personal support. This division of labor was believed to be necessary for the functioning of the existing economic system. Because of this kind of interdependency the family unit was thought to be assured of strength and stability. Parsons did

admit that females may succumb to their conflicts through neurotic illness or compulsive domesticity. Only a very small percentage of wives are in equal partnership roles, since husbands have more power through their superior resources (Scanzoni, 1975).

This division of labor by sex is supported in our society. This was demonstrated by the results of one survey which revealed that half the adults interviewed held views that the "woman's place is in the home" and 44% agreed with the statement that "men in our society have had certain responsibilities, women have had others and this is the way it should be" (Farmer, 1976).

Role research

Role theory provides a structure to relate work with other areas of an individual's life. "Role intrusion," "role conflict," and "role spillover" are terms which describe how one role may intrude upon another and role stress develop within the individual. Role stress is of growing interest in relationship to phases of career development and of career change, particularly among females and older workers. Role stress can result from any part of the vocational process, from early decisions to actual entry.

Females experience conflict and guilt about leaving their homes and families to undertake time-consuming ventures, even when personally fulfilling such as returning to college (Farmer, 1976). While home-career conflict continues to be an important mediator of career motivation for reentry females, the resulting effect on that motivation is unclear (Tittle & Denker, 1977).

Differences between males and females exist especially when defining boundaries between work and home. Females may allow demands of family to come into work time, e.g., taking a child to the sitter over the noon hour, leaving work because of sick child, etc. (Pleck, 1977). Men who work keep the work role separate from the family, leading two sequential roles, but females are seen to experience the two roles simultaneously (Hall, 1972). In this way, females are especially subject to role overload, even though this expectation is the 'cultural mandate' which gives priority of family over work (Coser & Rokoff, 1971).

The duties of wife and mother are not compatible with those of a career person. Negative outcomes include the limitations in time and energy, the husband's feeling a loss of support, others indicate the child relationships are neglected, and the pressure of societal definition assigns childhood crises as the responsibility of the mother (Gordon & Hall, 1974). Social expectations extend even to the planning of careers.

Females' motivation has been described as a desire for love, approval, and social approbation (Hoffman, 1972). The female desire for approval develops from the patterns of child rearing, in which the female is given inadequate parental encouragement in early independence strivings. Hoffman argues that separation of the female from the mother is delayed and ultimately incomplete, because of the same sexness and few conflicts with parents. The outcome is that the female does not develop confidence in her coping abilities. "She retains her infantile fears of abandonment. Safety and effectiveness lie in her affective

ties" (Hoffman, 1972).

Stein and Bailey (1973) disagree with this interpretation. They believe females do not work for social approval, but that it is an area where she strives for excellence. Here, she can satisfy need for achievement without the threat of affiliative loss.

There is less role conflict in females in the professions of law, medicine, and college teaching. These females tend to WORK IN careers but they do not HAVE careers in the same manner as males do. They pace their work to avoid excess role conflict and stress which is compounded by home responsibilities. When role conflicts occur, these females generally resolved them in favor of home role demands. This pattern in which females are socialized to tolerate marriage as the primary goal is described as "tolerance of domestication" (Poloma & Garland, 1971).

Occupational Choice

Vocational choice theories

Vocational choice theories are based upon economic assumptions and focus on assessments of gains and losses. Some aspects of vocational choice include awareness of a possible range of choices to be made, beliefs about being able to initiate and sustain the effort needed to carry out the choice (Bandura, 1977), probability of successful performance of the choice (Vroom, 1964; Lawler & Suttle, 1973), and methods of actually carrying out the decision. Zytowski (1969) describes occupational choice as involving personal attributes such as intelligence and personal resources, which allows an individual to view

available alternatives as actual possibilities with possible choice.

The relevance of vocational theory for special groups is based on the assumption that individuals possess an array of career choices and they are motivated to satisfy their interests through these choices. Since females as a group tend to be limited in available and acceptable choices, there is little explanatory usefulness of existing theories for females (Osipow, 1975).

The assumption of alternative career choices may need further study in the case of females, as the homemaker role is seen as primary and central to all vocational decisions (Psathas, 1968). For Psathas, the intention to marry, the time of marriage and the husband's attitude toward the wife working are major influences on females' choice of work, and work attitudes.

Zytowski (1969) was one theorist who attempted to devise a theory of female vocational development. His nine postulates characterizing female patterns summarize a position that the basic life role for females is that of homemaker, but this role is not static and will eventually be no different than the role of males due to increased opportunity and changing situational factors such as shared parenting tasks and readily available child care centers.

The classification of certain work roles as being appropriate for females and the consequent lack of status and low pay have a historical explanation. Females are not only confronted with disparate expectations in role-fulfillment, but are also faced with limited career opportunities as a function of societal role expectations. The

perception of limited appropriate work roles for females is also effected by proportionately more females entering the work force.

Females remain a small minority in many fields, even though their relative growth within the field may have been significant. The positions in the top echelon have shown the least growth. Females constitute only 5% of our top executives in the corporate leadership and administrative positions. In Congress, only 5% of the members are females. Females hold 71% of the classroom teaching positions but fewer than 2% of the school superintendent positions. Few females in 1975-6 achieved bachelor's degrees in nontraditional areas like the physical sciences (1%), architecture (1%), and engineering and computer science (less than 1%). Factors which influence these choices range from personal characteristics, through educational and other experiences to general attitudes and expectations of others (Fuchs, 1975).

When college students were classified by Holland's occupational categories, significant differences were noted in choice of occupation by males and females, and corresponding attributes. Further studies of the influence of education on females choice of careers includes Strong and Campbell's study which shows males score high in the realistic category and females score lowest in the realistic category. Females do not change significantly in their stance during college while males do see some change towards the artistic category. This is confirmed by additional studies by Campbell and Holland (1972).

The relationship between occupational choice and personality characteristics indicates a correlation between masculinity and

medicine, science, and the political, administrative, and human arts. Those scoring the highest in femininity, as well as repression and suppression, indicate career choices in sociology, religion, and education. These persons showed least correlation with tolerance and scholarly orientation among those occupational choices studied.

Nontraditional careers correlate with higher levels of educational and work status in mothers, the values of father, general parental support, high socioeconomic levels, small family size and position in the family as first born. Peer group influence during adolescence is usually negative for girls, because most female peers are leaning towards traditional relationships.

There is a bias which exists when advising females, particularly when suggesting that they seek low level or traditional occupations (Fitzgerald & Crites, 1980). The Strong-Campbell Interest Inventory ("SCII") and the new form of the Kuder Occupational Interest Survey have attempted to eliminate problems of channeling females into traditional careers and thereby widen options for females. However, the opposite sex scales of the SCII may actually reinforce the choice of traditional occupation (Crites, 1961; Johnson, 1974).

In this study, sixty per cent of the females intending to graduate from college were entering teaching, clerical, and health fields. Of the two hundred occupations generally chosen by males only twenty-eight were mentioned by these females and those were primarily in those fields where an oversupply of workers was projected.

Sex-role perception is related to occupational choice as well as other factors. Haber (1980) found that in one population of career-oriented females, 20% scored in the masculine range in the BSRI and 80% scored as androgenous. Thirty percent of these females wanted no children. She also found that the parents with traditional expectations were nondirective in stating goals for daughters, and subsequently, their direct support kept daughters from gaining goals. The majority of these nondirected females held traditional jobs. Thirty percent of the homemakers studied said they would use their education only if necessary (Haber, 1980). This is supported by Angrist (1972) who concluded that education for females is "contingency training." Females live lives adjusting to and preparing for contingencies, including the possibility of the need for employment. She noted that 70% of the females who work either teach, nurse, do social work, or are secretaries.

Major changes occur to college freshmen as a result of leaving home, both with sex-role attitudes and with the increase of cognitive complexity which impacts upon decision-making (Harren, Kass, Tinsely, & Moreland, 1979). As college freshmen, females begin to indicate more androgenous attitudes as they move towards making satisfying occupational decisions. As sophomores, they increase the range of behavior considered appropriate for females. As juniors, the progress in decision-making decreases. As seniors, females then appear to retreat from androgeny and consequently narrow the number of choices and reduce the number of dimensions used to evaluate careers. This movement is consistent with the fact that most females finally choose feminine

occupations (Harren, 1979). This may be explained by the growing proximity of the real world as they approach graduation, and this also may be more acceptable to a possible future husband as marriage also appears to be more seriously considered at this time (Faunce, 1968). Limiting factors such as a negative role concept, success avoidance, low self esteem, fear of competition, lack of confidence and fear of loss of femininity affect both career choice and commitment (DiSabatino, 1976). Changes in role and self-concept from the more conventional towards the inclusion of characteristics usually associated with males may lead in turn to more freedom in career choice. Using Holland's criteria, generally the investigative type of individual is the best decision maker and the conventional type the poorest decision maker (Holland, 1973). This difference in decision-making strategies may also be a factor when making the decisions concerning careers.

There is a multiplicity of factors which may influence choice of career. The development of self-concept and sex-role perceptions, social learning, relationships, educational achievement, and other factors are all influencing work choice within each female's unique environment where this decision must be made.

Work Commitment

Commitment to work may be described as the degree to which one develops identity through work. The centrality of work or importance of work in a person's life is also a way of defining work commitment. This view of work as an identity and as central to a lifestyle which places one squarely in the work world, with schedules, activities, interests,

personal relationships, and even status of health may be deduced from the statement regarding occupational status. When a male is introduced or described, or describes himself, the choice of description is usually in terms of the work he performs. For example, one will say "He is a plumber" (Harmon, 1970).

The degree of commitment to work experienced by the person affects that person's participation in both a qualitative and quantitative sense. Work commitment is judged in terms of psychology of participation. The greater the degree to which time, energy, and the definition of self is involved in the persons work, the greater the commitment to that work. A noninvolved worker would gain his identity through activities outside the workplace. For that individual, work has a more limited meaning (Cook & Wall, 1980).

The cost of lack of commitment and dissatisfaction with work to employers is enormous. The University of Louisville estimates the cost of absenteeism in the United States as twenty billion dollars a year in lost productivity and additional labor expenses. Approximately half of work absences occurring may have been attributed to poor attitudes and lack of commitment to the job. Workers tend to change jobs more frequently when they are unhappy. This results in lower productivity and higher labor costs as new employees are trained, poor workmanship, and even sabotage. Additional costs to employers and communities accrue as stress affects the worker's health, his family and community relationships, and the way he spends his leisure time (US News and World Report, April 6, 1981, p. 69).

Females, however, are not seen as having an identity which is closely related to the work they do. They tend to describe themselves first as wives and mothers, secondly in terms of interests and activities and will often describe the work activity as "work" rather than naming the specific occupation in which they are involved (Andrisani & Shapiro, 1978).

The perception of females as having less commitment to their careers, of having less ambition or less motivation to gain responsible positions in organizations, relates to lowered expectations, performance, and opportunities. Commonly, females are assumed to give higher priorities to relationships than to work, being more involved with family and others, than with personal achievement and their work environments (Farmer, 1976).

Assumptions of deficiency of work commitment result in additional impediments to females' advancement within a job. Roby (1981) states that Jerdes found that employers expect females to put family first and their own careers second. Employers tend to group all females together in this assumption, and as a result, the never-married females are also mistakenly evaluated in terms of these ideas. Since employers perceive lower work commitment in females, they tend to exclude all females from jobs which have responsibility and potential for advancement. Partly due to this and partly due to an actual intermittent career, females tend to stay on the low end of the responsibility, status, and pay scales. When some females do interrupt their careers, taking time out for family, they remain at an earlier stage in career development, or if

reentering, do so at a stage of development which corresponds to a much earlier age level of males.

Assumptions that females are less assertive, ambitious, and less career oriented than males are related to arguments concerning sex-role socialization, personality attributes and occupational values and their relation to career choices and performance. When occupational level is controlled, both male and female workers indicate different values. Those with lower level jobs tend to value extrinsic factors, such as pay, congeniality, benefits, and pleasant working conditions (Kaufman & Feters, 1980).

Osipow describes females' work commitment as the intention to work more or less continuously throughout various stages of life regardless of competing obligations or financial need. This orientation is becoming more socially acceptable for females and therefore the relationship of sex role to work commitment is weakening (Osipow, 1975).

Attitudes concerning sex roles are associated with work commitment and tend to have a negative influence on the optimal development of a female's career. Theoretical explanations are based less upon developmental models and more on trait-factor approaches. Role expectations influence individual characteristics and affect work attitudes. Characteristics which are a negative influence on females' commitment to work include lower academic self-confidence, lack of promotional opportunities, less competitive spirit, fear of technical and math areas, fear of success and unwillingness to take risks. The perception of females as having less work commitment and having less

ambition to rise in hierarchical organizations may result in the lack of existing opportunities, females' own low expectations for themselves, and their subsequent decreased performance.

The current feminist movement may have a limited impact on female work commitment. Spence et al. (1975) found that traditional males and females preferred competent females with feminine interests to the one with masculine interests, while the reverse was true for profeminist females. Males most preferred females who acknowledged family responsibilities and planned to stay at home (Pines, 1979). Despite acknowledged competence, and past successes and achievements, females are seen as less able just because of her plans to leave the work force while her children are small (Shaffer & Wegley, 1974; Kristal et al., 1975). While competency is admired, females are expected to accept traditional feminine roles as well. Profeminist males, not traditional males, were the subjects who expressed greatest liking for females who most valued family goals (Pines, 1979).

Females who have androgenous and masculine self-perceptions, according to the Bem Sex Role Inventory, show significantly higher need for achievement than feminine and undifferentiated females and tend to see work commitment in a more positive light (Bem, 1974; Holland & Gottfredson, 1976).

Other factors involved in work commitment include age, marital status, children, and need for achievement.

Eighteen year old females indicate no significant differences in attitudes towards work even though they later indicated an orientation

towards career, or noncareer. The difference in career plans for this population diverged after beginning college (Harmon, 1981). Harmon indicates that females who are committed to careers were more apt to attend college longer, work more years after leaving college, marry later in life, bear fewer children (and these at more advanced ages) than the noncommitted group. The two groups did not differ significantly on either high school percentile rank or SAT scores. The degree of ability, therefore, did not explain vocational behavior.

Marital status has not been shown in research to affect commitment. Some past explanations of noncommitment in females is that they enjoy homemaking and volunteer activities, and identify with their husbands' achievements, although Harmon's study indicates that career females spend as much time with volunteer work and enjoy homemaking as much as the noncommitted female. Harmon's study further concluded that career females did not report less satisfaction from home life nor had less accomplished husbands. The reasons females become committed to careers may be motivational rather than circumstantial.

Motivation towards employment involves the positive relationship between efforts and valued rewards being evident to the individual. This aspect of motivation is labeled as a belief in ones personal efficacy in the job (Lawler & Suttle, 1973). First, there must appear the concept of the probability of reward for effort. This is a two step perception which involves the probability that 1) effort will result in good performance and that 2) good performance will yield results. Reviewing the early socialization of girls in regard to their abilities,

and their history of relatively fewer rewards for performance, it is readily seen that differences in female employment attitudes and little commitment to career would be logical outcomes (Hoffman, 1972).

The belief that effort and good job performance will pay off resembles to some extent that cluster of values we label the work ethic. Some assumptions of females' career commitment can be grouped and labeled as a deficit theory. Underlying much of the job satisfaction and work commitment research has been an implicit concern with the vitality of the work ethic. Gurin (1974) suggests that there are real differences between measuring a person's perception that hard work will generally pay off and the perception that one's own individual effort will lead to success. Gurin showed that blacks differed very little from whites on what she terms a control-ideology factor. The idea that hard work pays off was reaffirmed, but real racial differences appeared on what she termed a personal-control factor, which produced some payoff for individual effort. That is, effort will be rewarded, but as a minority member, it will not pay off for me. This attitude can similarly be seen with females and their perceptions of effort. The issue is not whether an individual holds a strong belief in the work ethic but rather, whether an individual believes in personal efficacy (Kornhauser, 1965).

These views of females as being less concerned with work and less serious about the long-term development of a career influence their own and others expectations of behavior and level of achievement.

Organizational Commitment

Steers' definition of organizational commitment describes the relative strength of an individual's identification with and involvement in a particular organization. An involved worker identifies with both his work and his workplace. This has been studied extensively during the past twenty-five years, although the focus has been on the identification and measurement of male commitment (Steers, 1977).

Studies have affirmed the assumption that committed employees may perform better than uncommitted ones. Organizational commitment is a better predictor of employee turnover than job satisfaction (Steers, 1977).

Steers found no relationship between organizational commitment and job performance as had been expected. This may be related to attendance but may also relate to those individuals who tend to value security, self selecting a position where they feel comfortable in a non-threatening environment, while high performers seek challenge elsewhere.

Theory and research dealing with worker behavior in organizations has tended to emphasize the view that the work institution is the focal institutional setting (Dubin et al., 1975; Argyris, 1973). This has led to the oversimplified assumption that individuals are either committed to, or alienated from institutions in which they function (Bell, 1961). Little attention has been given to the possibility, suggested by early social theorists (Mead, 1934) that individuals may be able and competent to perform effectively in many institutional settings. To do this, it may be necessary for them to keep their central life interest from being

focused in any single institution. Just such a group of workers may have a flexible focus and be the adaptive citizens of the future. They would not be alienated but able to adjust to any institutional setting by varying their degree of commitment to it in accordance with the specific features of that work setting that are particularly attractive to them. Toffler (1970) emphasizes the need for this kind of flexibility in moving from one situation to another with comfort. Variables such as age, education and need for achievement were found to be antecedents of organizational commitment in earlier empirical studies (Bhagat & Chassie, 1981). Age is seen to affect organizational commitment in several ways. The age of the employee affects the awareness of alternatives to a present position (Theibault & Kelley, 1979). Hrebiniak and Alutto (1971) have shown that commitment is related to age. Age can reduce the attractiveness of individuals to other organizations, thus reducing the person's mobility (Caplow & McGee, 1958).

Organizational commitment in males has been shown to be significantly correlated with both tenure and advancement in position to higher hierarchical levels (Hall & Schneider, 1977; Welsch & LaVan, 1981).

There are indications that status within the organization affects an individual's commitment to work more than sex roles. Dubin, Champoux, and Porter (1975) found that blue collar workers of both sexes do not perceive the employing organization as a major source of rewards and satisfactions.

Hall, Schneider, and Nygren (1970) show organizational commitment related to opportunities for achievement to education, to role tension and other factors. Not only the length of time served with the organization but role tension, an uncertainty about role requirements, insufficient organizational authority and influence, inadequacy of resources and inability to cope with interpersonal, and social demands related significantly with organizational commitment (Hrebiniak & Alutto, 1978).

In reviewing the relationship between education and organizational commitment, some early literature described aspects of these variables as having a potentially negative relationship. In specific fields, the educational process, such as in medicine, nursing, law and business, seems to encourage the growth of professional identification. As a result there may be a conflict between commitment to one's organization and commitment to one's profession (Hall, Schneider, & Nygren, 1970). Integration of the two has not been found to be common. Numerous studies have described conflict between individuals, especially professionals, and their organization (McGregor, 1960; Argyris, 1964).

Sex and marital status have been considered frequently in relation to work commitment and are predictive of females occupational behavior (Hrebiniak & Alutto, 1978; Alonso, 1971). These two variables also affect organizational commitment. Females with familial and other social role demands may have considerable difficulty in managing their work role behaviors effectively (Bremer & Wittig, 1980). As competency and stability are questions raised in reference to female workers, this

concept will be explored further. Evidence from previous empirical studies of Hall (1972) and Hall and Gordon (1973) indicates a potential for role stress and role overload increase for females when they assume multiple roles of wife, mother and employee. Role-related characteristics are the factors emphasized by Bhagat and Chassie (1981) who examined aspects of female commitment to organization and operationalized role relations in terms of sex-role pressure. With role stress being an important factor, it follows that females' greater probability of role stress produces a major negative impact on their organizational commitment. In view of earlier work on females' role conflict and job related attitudinal outcomes, this finding is not surprising (Hall & Gordon, 1973; Hall, 1972; Matthews & Teideman, 1966).

Gordon and Strober (1975) have pointed out the need for working females to improve their management of conflicting roles. Ritzer (1977) noted that females in upper levels of an organization tended to experience a significantly greater amount of "internal strain" due to conflicting role demands on their time and energy. Given these findings on the need of females for effective role management, the negative influence of sex-role related stress on commitment to their employing organization is to be expected.

Role conflict and role ambiguity are thought to be significantly negatively related to organizational commitment. It appears that employees whose roles are not well-integrated have lower commitment. Generally, research has shown role conflict and ambiguity to be adversely related to a variety of attitudinal, psychosomatic and

behavioral outcomes (Morris, Steers, & Koch, 1979a). Authors have argued that a lack of tension and ambiguity in the performance of organizational roles could be properly regarded as an organizational asset (Likert, 1961; Bennis, 1962; Kornhauser, 1965).

It can similarly be argued that the existence of role tension and uncertainty results in increased attractiveness of alternatives (Alutto, 1969). Both work commitment and organizational commitment involve more complex factors for females due to their position as filling multiple roles. Since the concepts involved in these two variables are primarily based on research with males, care must be taken when generalizing to the work behaviors of females.

Risk-taking Characteristics

The description of characteristics associated with risk are drawn from research by McClelland (1971) and involve a constellation of concepts. Risk-taking appears to be inherently associated with motivation and the need to achieve. The achievement motive is the desire to accomplish something of value of importance through ones own efforts and to meet standards of excellence. The low achievement motivation assigned to females (Tyler, 1961; Hoffman, 1972) relates to female occupational choice and career development.

Females have been thought to be motivated by desire to please others rather than standards of excellence. Models by McClelland (1971) and Atkinson (1953) have presented relationships between risk-taking behavior, achievement and motivation. In their early studies of risk-taking, they describe a theoretical model with three terms: motive,

expectancy and incentive. Motivation is defined here as the combination of motive towards action, expectancy of outcome and incentive. Strength of motivation depends upon one's expectancy of success, a choice of tasks available in the level of aspiration, and a possibility of attainment of the incentive which is considered valuable. In addition, there is a further motive to avoid failure. Expectancy is essentially the subjective probability of consequences, and the capacity for satisfaction. Incentive is the relative attractiveness of a specific goal.

A high achieving person generally chooses moderate risks and to the extent he wants to avoid failure will choose activities that minimizes his own anxiety about failure (Atkinson & Litwin, 1959). The strength of motivation is highest when there are no alternatives, when the probability of success is .50. As success is experienced, the probability of success rises and the person tends toward more difficult tasks. As probability approaches 1.0 for either failure or success, interest in task is lost. The person whose primary motive is to avoid failure, tends to select the easiest goal or to set a goal which he cannot possibly reach.

Aspiration is seen as the difference between the tendency to achieve success (motive to achieve success times subjective probability of success times the positive incentive of success) and the tendency to avoid failure (motive to avoid failure times negative subjective probability of failure times negative incentive of failure (Atkinson et al., 1960).

Horner's concept (1969) of a motive to avoid success grew out of this expectancy-value motivation theory framework (McClelland, Atkinson, Clark, & Lowell, 1953). Avoidance of success is not a motive or personality disposition but is situationally determined and dependent upon the expectancy of a particular outcome (Tresemer, 1975; Spence, 1974).

There is no direct evidence of elements of individual differences in risk-taking entering into cognitive behaviors (Atkinson et al., 1960). Gaining understanding of probability has been found to be independent of changing risk patterns (Hensley, 1977). Manifest anxiety and rigidity inversely relate to risk-taking, while impulsiveness is positively associated. Impulsive subjects are expected to pay less regard to the future, and therefore will take more risk (Wallach & Kogan, 1964). Among the personality variables examined, independence of judgment appears to be a powerful predictor of initial risk-taking even after taking into account the effect of age (Hensley, 1977).

At least four personality dimensions relate to risk-taking elements of the work personality and the desired work environment. These are 1) flexibility, or the ability to tolerate "discorrespondence" with the work environment; 2) activeness in adjusting the work environment by working directly upon it; 3) reactivity, or acting upon one's self; and 4) celerity, which is the speed of response to improve correspondence between oneself and one's environment (Dawis & Lofquist, 1976).

Wallach and Wing (1968), working with college students, indicated risk as a cultural value. Persons of both sexes exhibit very strong error toward viewing themselves as greater risk takers than their peers. After group discussion, those with low risk tendencies increased their willingness to take risks. Apparently, the subjects had perceived peers as more cautious than themselves and subsequently increased their own risk tendencies to correlate with the new information. This shift towards increased risk-taking was greater for males than for females.

Age is also a factor in risk-taking. Chaubey (1974) studied the effect of age on achievement motivation and risk using rural males. He reported steady decline in achievement motivation with aging. The younger males showed a stronger preference for intermediate risk, which might imply that they were more concerned with success. McClelland (1971) substantiates this idea, although Vroom and Pahl (1971) saw younger persons as being more risky than adults. Sex and age differences in confidence appeared to correlate with this study in terms of risk-taking or a boldness construct. Young males were seen as significantly higher in confidence than old males, but young females and old females did not differ (Foersterling, 1980).

In 1967, Kogan and Wallach examined business and administration majors and found no significant differences in risk-taking between males and females. Sophomores tended to be more risk-taking than other age groups, and marketing majors tended to be less risk-taking. Rural students tended to be less risk-taking than students from very small town or large metropolitan areas.

Risk-taking characteristics are also related to decision-making. Risk is particularly important when considering choice of work, degree of involvement in work and anticipated level of achievement. Decision-making involves the desirability of expected outcome and probabilities of outcomes. Decision theorists describe the person making the decision as using accumulated knowledge in choosing between alternatives (Harren, 1979; Teideman, 1961). This information is interpreted by the individual in the context of past experience. The pre-existing framework of knowledge and experience includes the entire socializing process which the female has been subject to, the attitudes and understanding of the social environment which has been perceived and comprehended.

Eventual choice of occupation will depend upon one's perception of the occupation as suitable for the role in which one views himself. Careers are usually described as relating to sex stereotypes. These stereotypes are learned even by very young children (Entwisle & Greenberger, 1972). When confronted with the desire to enter a nontraditional occupation, it is hypothesized that this choice will involve more risk. The relationship between independence and the decision-making indexes of Kogan and Wallach's (1967) study suggest the extent to which a risk-taking model may be applied to a broad net of social decision-making behaviors. The kinds of risks taken in the context of monetary gain or loss may be related to the forms of risk assumed when one deviates from the opinion of others who are seen as significant.

Cognitive conservatism relates to this study since females are seen as conservative, which may be learned through fear of punishment in subjectively ambiguous situations. Males exhibit greater confidence of judgment than females, and are seen as more extreme than females in their judgments at low and moderate confidence levels, but reverse pattern at high confidence levels. When a situation is highly certain, a counter-phobic boldness may occur in females and a subsequent release of boldness occurs (Wallach & Kogan, 1964).

Choice of occupation

The risk-taking characteristics of an individual are related to the probability of work success. This probability involves two components: 1) the level of difficulty of the occupation, and 2) choice of field. The individual's perception of risk, the degree of motivation, the degree of intensity of incentive, and judgment concerning their probable success are all related to choice of occupation (Lawler & Suttle, 1973).

When measures of achievement motivation (approach tendency) and fear of failure (avoidance tendency) are used together, a more accurate picture of outcome is possible (Atkinson & Litwin, 1959). The person who is highly motivated to achieve is disposed to take moderate risks (McClelland, 1956). There is a positive relationship between an individual's achievement motivation and the prestige rank of occupational preference (Minor & Neel, 1958).

Vocational choice is an extension of achievement motivation (Morris, 1966). Persons who are high in achievement motivation and low in fear of failure tend to be realistic in choices. Those low in

achievement motivation and high in fear of failure tend to be unrealistic (Mahone, 1960). In 1958, Mandler and Cowen demonstrated through a self-report questionnaire that high motivators tend to make typical choices which may be either realistic or nonrealistic, and low motivators tend to make nontypical choices.

High school students have demonstrated a preference for an indeterminant degree of risk which varied directly as strength of achievement motivation, and inversely as strength of avoidance motivation. Similar studies show that moderate risk rather than speculative or very low is the preferred level of risk (McClelland, 1956), and that higher risk relates to prestige and rank (Minor & Neel, 1958).

Sex differences

Sex differences in risk-taking have been examined by few researchers before 1968, with no instances of adult differences noted in degree of risk-taking (Maccoby & Jacklin, 1974). Some changes have arisen from revisions in method of risk evaluation. Kogan and Wallach in 1959 had seen significant differences across specific items but in 1964 found no overall sex differences. This resulted in a revision of their instrument.

Unexpectedly, a greater perception of risk was attributed to females. When adults were seen in realistic situations of high achievement, females were seen as risking more than males. This was particularly true of males' perceptions of the degree of risk the females would be taking (Kogan & Dorros, 1978).

Foersterling (1980) saw some sex differences in teens relating probability with achievement. Females were seen as less willing to risk when there existed objective probabilities, but more risking when subjective probabilities were shown. Females chose tasks which were objectively easier than those chosen by males, but subjectively these tasks were more difficult than the tasks which males chose. The discrepancy existed between the objective difficulty and the rating of their subjective probability of success (Foersterling, 1980).

Cecil (1972) indicated no significant difference in risk-taking between male and female subjects. Adults for Greene (1964) demonstrated greater risk-taking in males, but that same year Kogan and Wallach found no sex differences across a variety of risk-taking tasks. Those females who express ideas of self-sufficiency and independence may be indulging in a type of 'social risk-taking' relative to certain normative expectations for females. Rigidity in females may reflect a way of ordering life so as to preclude the risk of having to cope with the unexpected. Females may select more extreme strategies than males and experience less success in chance situations to avoid this uncertainty (Kogan & Wallach, 1967).

Sex differences in goal setting may reflect the cultural norms which show males as higher achievers. This does not explain the position of those females who do have high achievement motivations which correspond to males. The females who do not underachieve and have not resigned themselves to the limitations placed upon them by social expectations (Ungar & Denmark, 1975). Many professional females work

very hard, are highly motivated to succeed, and perform at this high level without many of the professional supports available to males (Frieze, 1975).

When females are high achievers, differences may come about in differences in socialization experiences and expectations of appropriate behavior. One example is the relationship between parents and some daughters as there is a correlation between successful females in the fields of engineering, medicine and law and the emotional distance perceived in their relationship with their mothers (Tangri, 1972).

Increasingly, girls are encouraged to take part in activities which formerly were thought to be boys, to generally be more active, are praised more for these activities, and also encouraged to take more risks in those activities. The correlation between girls who remember their childhood as that of a 'tomboy' and the subsequent choice of a nontraditional career is clear (Maccoby & Jacklin, 1974). Thus, the perceived degree of risk is impacted by changing social expectations.

Motivation and fear of success

The fear of success is a complex phenomena assumed to have its origins in the social expectations of females. There is discussion concerning both its existence and possible causes. Avoidance of success is not a motive but reflects a perception common to both sexes of negative social consequences of female success in competitive situations. Persons also view success for females as deviant rather than nondeviant and are considered to be in situations of role overload more than those of no overload. The increased negative response was not

to females' success, but to the assumed consequences of role overload in specific situations (Bremer & Wittig, 1980).

A person who wants to avoid failure will tend to lower aspirations and accept the loss in achievement and satisfaction in order to avoid possibility of failure. This avoidance tendency seems capable of being aroused not only by threat of an immediate achievement situation, but also by role activities which will derive from the situation (Burnstein, 1963).

In measuring achievement, it is assumed that in a person who has high achievement scores, the achievement motive is stronger than the motive to avoid failure (Atkinson, 1958). As a consequence, it is predicted that persons having high achievement scores will prefer intermediate risk or difficulty. Males who are high in achievement motivation show fairly strong preference for intermediate risk in game activity. The tendency is for relatively more anxious males to avoid intermediate risk by preferring 'long shots' more frequently than 'sure things'. Trying very difficult tasks even when there appears to be no chance of success, may often appear more socially desirable (Atkinson, 1958).

Individuals with a high tendency to avoid failure and low in achievement are as likely to overaspire to an occupation whose probability of attainment is extremely low as they are to underaspire to an occupation they are certain of attaining. Both these positions allow the person to avoid a real test of competence (Atkinson, 1958).

Horner (1970, 1972a) emphasized the role of affiliative factors in defining success for some females and the importance of societal norms that define success as unfeminine. Her fear of success hypotheses states that the competitive element in most achievement situations produces a conflict in females since competition is culturally defined as aggressive and therefore unfeminine.

Other research (Tyler, 1961) describes the self-fulfilling prophecy of females who do not expect to do well, and when they do not, they further lower their expectations and self-confidence. There are inconsistent findings in research regarding females' achievement motivations, suggesting that methodological differences among the studies contribute towards this (Alper, 1974).

Fear of success themes also differ according to role orientation. Females scoring high in femininity more often reflect the expectancy of interpersonal rejection. Those scoring low in femininity describe themselves as having not yet accomplished their tasks. More precisely, this could be called the fear of role inappropriateness rather than fear of success (Hoult & Entwisle, 1968).

Studies involving role show that some females tend to avoid those activities which will lead to advancement and marked success as they may be subsequently seen as being less feminine or as threatening to their peers, fellow workers, husbands, etc.

Bremer and Wittig (1980) conclude that fear of success is a misnomer for male and female response to a female's role description when it involves deviance and overload. It might be appropriate to

describe the response as one to sex-role deviance. It might reflect the degree of both males' and females' negative evaluation of the situation of "double work." Success may lead to added responsibilities being placed upon its bearer. Females may tend to shy away for this very reason, since their outside responsibilities preclude the additional energy and time required in adding even more or else they accept the dependent and submissive requirements of the "feminine" role.

In examining the differences between males and females in terms of achievement motivation, Horner (1969) described an increase of fear and anxiety among bright, high-achieving females. Horner demonstrated that 65% of the females show significant test anxiety as compared with less than 10% of the male students. During repeated competitive tests, those females who did not indicate fear of success improved their scores over those they achieved while working alone. Females high in fear of success did poorer in competition than during individual tries. Those females who showed the greatest amount of fear of success had career plans which involved homemaking and traditional work roles such as teaching. The motive to avoid success seems to point up the perceived conflict between achievement and femininity.

Females scoring high in the motive to avoid success performed better under noncompetitive conditions, while females and males low on the motive performed better under competitive conditions (Horner, 1969). Other research has disagreed with this concept, stating that males have shown as much or more fear of success images (Tresemmer, 1975). Both Tangri (1972) and Horner (1969) show 33-35% of the females do not show

fear of success.

Summary

Risk characteristics appear to vary according to the sequence of events, situations, perception of self and the environment of the individual. They also seem to relate to age, perception of context and many other factors. Cultural values and sex-role expectations affect the degree to which females demonstrate these characteristics, but the importance of research is evident in the association of these characteristics with need for achievement and motivation to succeed. The debated fear-of-success concept involves the expectations that females will not be successful in interpersonal relationships if they are successful in educational and occupational areas.

High aspiration levels including occupational achievements and standards of excellence in work imply the existence of characteristics which are considered negative in females. Flexibility in roles, the ability to accept ambiguous situations, age, independence of judgment, competitiveness, and boldness are some specific characteristics noted in the research which will affect females' choice of occupation as well as the degree of involvement in their work.

In addition to these factors, situational factors influence females' choice of work and work attitudes. Research has indicated the factors marital status, children, job level, and residency in terms of availability of resources and opportunities as influencing female's occupational experiences.

This group of variables which has been shown to affect females' work lives will be used to estimate the probability of classification of occupational choice, degree of work commitment, and degree of occupational commitment.

METHODOLOGY

Purpose

This research project examines female sex-appropriate occupational choice, work commitment, and organizational commitment as they relate to residency, age, education, role stress, sex-role identity, risk-taking characteristics, marital status, children, and job level.

The present study was designed to investigate characteristics which may influence women's work. This includes choice of work and work attitudes. The subjects were selected from the general population in urban and rural areas of the middle west. A total of 164 females completed and returned the questionnaires.

The subjects completed questionnaires giving information related to their education, type of work and age. Marital status, the number and ages of children, and their subjective evaluation of time spent in work as opposed to other activities were ranked and scored according to the probable degree of stress associated with these factors. Sex-role perception, work commitment, organizational commitment, and three characteristics associated with risk-taking were assessed by incorporating standard instruments within the questionnaire. The demographic and attitudinal information was then used in the analysis which compared these females as groups. The groups were defined as 1) occupational choice: traditional, neuter, and nontraditional, 2) degree of work commitment: low, average, and high, and 3) degree of organizational commitment: low, average, and high.

The procedures used during this study included composition of the questionnaire, completion of a pilot study, selection of the sample, collection of data, determination of the experimental design and statistical procedures. These procedures are discussed in the following pages.

Questionnaire

In addition to other items, four instruments used included the Bem Sex Role Inventory (BSRI), a Work Attitudes Measure by Lodahl and Kejner (1965), the Cook and Wall (1980) Measure of Organizational Commitment and three subscales of the 16 Personality Factors. The questionnaire was designed to require a minimum of instruction in order to complete successfully. The questions included were brief and the instructions easily understood. Instructions for the specific measures listed above were duplicated as given in the original (see Appendix A).

Bem Sex Role Inventory (BSRI)

This is the most frequently used instrument for the assessment of sex-role attitudes in current literature (Strahan, 1975). The Bem Sex Role Inventory consists of three scales each of which is a list of 20 personality characteristics judged to be significantly more desirable for one sex than the other in North American society. It consists of twenty masculine, twenty feminine and twenty neutral adjectives. Respondents rate themselves on each adjective using a seven-point rating scale ranging from never or almost never true to always or almost always true.

The masculine terms include such traits as "ambitious" and "self-reliant" while feminine is defined by such qualities as "affect" and "sympathetic." Respondents indicated on a seven point scale how well each characteristic described him or her. There is also a social desirability score which is the result of the self-ratings on the neutral items calculated after the ratings on the ten undesirable characteristics are reversed. Scores can range from 1 (describes self in socially undesirable way) to 7 (describes self in socially desirable way).

Subjects scores are classified into one of four groups: 1) sex typed, if scores of members of either sex are above the median on the scale for their sex, 2) androgynous, if subjects' scores are higher than the medians on both sex scales, 3) sex reversed, if members of a particular sex have a score above the median on the scale for the other sex, and 4) undifferentiated, if subjects' scores are lower than both medians of both scales.

Marshall and Wijting (1982) describe the classification of subjects in the following sex-role identity groups: androgynous (high masculine and high feminine), feminine (low masculine and high feminine), masculine (high masculine and low feminine), or undifferentiated (low masculine and low feminine).

Subjects were classified as androgenous in this study by using Bem's (1977) procedure. Those women who had scores higher than the median on both the masculine and the feminine scale were classified as androgenous. Dummy coding was used to enter the sex-role perception

variable into the analysis (Kerlinger & Pedhazur, 1973).

The reliability of the BSRI has been well documented throughout the literature. Internal consistency is strong. Reliability coefficients are .86 for masculinity, .80 for femininity and .85 for androgyny. Male and female scores have been shown to be independent. The reliability is .90 for both masculinity and femininity and .83 for androgyny. The scores have also been shown to be independent from the tendency of subjects to describe themselves in a socially-desirable direction (Bem, 1974). This scale listed as items 18 through 78 on the questionnaire (see Appendix A).

Although there are other measures of sex-role self concept such as Spence, Helmreich and Stapp's Personal Attributes Questionnaire (1975), the BSRI has been more widely used and has received far more experimental attention and validation.

The 16 Personality Factors (16PF)

The study of risk-taking has had a history of problems, both in the concept of risk-taking and in the assessment of risk-taking characteristics. There has been difficulty in getting consistent results when examining risk, so to avoid this difficulty and similar ambiguities, three subscales from the 16PF, correlating with Atkinson's (1958) and Kogan and Wallach's (1967) statements of personality characteristics associated with risk-taking, were used to give an indication of possible risk-taking attitudes. The three scales chosen were: a) dominance, b) bold-adventurous, and c) liberality.

The 16PF is available in six forms, varying in length and reading difficulty. It was conceived for and has been used in clinical, industrial and personnel settings. The 16PF is based on a mathematical model of personality structure. Originally, it was thought of as a set of primary factor scales, but subsequent research has developed a set of second-order scales which measure a wide variety of personality factors including anxiety and creativity. The instrument includes faking scores for examination of validity. Validity is based upon considerable research, including that of Neal (1977) and Golden (1979). Research has shown a reliability of .95 (Karson & O'Dell, 1976).

Form A subscales with 36 responses was used in this study because it is the briefest and is written on a 6th and 7th grade reading level. This is the form most preferred for research and counseling. Scores are indicated on a scale from 1-10, with the average falling between 4 and 7. The subscales involved are described as dominance, bold-adventurous and liberality. The definitions are as follows:

- a. **Dominance:** Assertive, aggressive, and competitive. These individuals describe themselves as forceful and generally are very direct in their relations with other people. They appear independent minded, opinionated, argumentative, and authoritative.
- b. **Bold-adventurous:** Bold and energetic, "quick decision makers." Competitive athletes usually score high. Relationships are characterized as dominant, with a capacity for status and ambition, may be exhibitionist and enthusiastic, confident,

outgoing and enterprising, unafraid, uninhibited, socially bold, impulsive, and carefree.

- c. **Liberality:** radical, experimenting, free-thinking, critical, and liking innovation and change rather than conformity. These individuals are not restrained and timid, but analytic and believe that society should throw out traditions. They prefer to break established ways of doing things.

These subscales are listed as items 87 through 122 on the questionnaire (see Appendix A).

Work attitude scale

The work attitude measure was developed by Lodahl and Kejner (1965). Subscales of the Work Attitude Scale are organizational identification, involvement, and loyalty. The subscales have been shown to be factorally independent. The nine items assessing work involvement were used for this study. Correlated t tests carried out on data reveal no differences of statistical significance between mean scores across time, and likewise no reliable differences in variances occur. The internal homogeneity data together with cross-validated and test-retest data indicate they are within the conventional norms of a valid and reliable instrument (Lodahl & Kejner, 1965). This subscale is listed as responses nine through seventeen on the questionnaire (see Appendix A).

Organizational commitment measure

Cook and Wall (1980) operationally defined organizational commitment as the relative strength of an individual's identification and involvement with a particular organization. Organizational commitment is characterized by three factors: 1) a strong belief in and acceptance of the organization's goals and values, 2) a willingness to exert considerable effort on behalf of the organization, and 3) a strong and intense intention to maintain membership in the organization (Cook & Wall, 1980).

Each item of the instrument requires a response of the degree of agreement on a seven point scale with a statement related to the organizational commitment construct. The internal consistency reliability coefficient of the instrument based on past research has been shown to be .88 (coefficient alpha). Validity is stated to be within conventional norms (Mowday, Steers, & Porter, 1974). This subscale is listed as items 77 through 86 on the questionnaire (see Appendix A).

Role stress

Role stress includes home-career conflict, role overload and several closely related concepts. Role stress was assessed by a subjective statement by the respondent evaluating the degree of stress affecting work role due to family and other responsibilities. This role-related characteristic was measured in terms of experienced role stress, which includes consideration of the number of family, social or other work-related roles in which the subjects were involved. Hall and

Gordon (1973) presented a procedure for measuring females' role stress. Role stress was computed by assessing the perceived difference between percentage of time actually spent on each applicable role in comparison to the desired amount of time, which corresponded to a subjective statement by the female concerning perceived degree of stress. This is one measure of role stress. This item is stated as follows:

Do you believe that your responsibilities outside your job have affected or will affect the amount of time and energy that you have available for your work? Yes _____ No _____

The scores were categorized with "Yes" equaling 1 and "No" equaling 2; this item is number seven on the questionnaire (see Appendix A).

Biographical data

Five questions were used to obtain information on the respondent's age, education, marital status, occupational status, and number and ages of children. These items are listed one through five on the questionnaire (see Appendix A).

The descriptors of the variables listed above are specified as follows:

Age--the current chronological age as stated by respondent;

Education--with 1 = High school

2 = Some college or technical training

3 = College degree

4 = Graduate and post-graduate work;

Occupational status--occupation as traditional, neuter, or non-

traditional was assessed by comparison of occupation with

the percentages of males and females in that occupation listed by sex in the 1980 United States Census Report. A ratio of 60% or more females to males was considered traditional, while a ration of 60% or more males to females, nontraditional. Neutral occupations are comprised of approximately equal numbers of males and females.

Job level--level of position as determined by the level of education generally required:

- 1 = high school
- 2 = some college or technical training
- 3 = college degree
- 4 = graduate and post-graduate work;

Marital status--the categories and scoring involves the associated degree of stress:

- 1 = single
- 2 = divorced, widowed, or separated
- 3 = married;

Children--the manner in which the children were assessed involves the associated degree of stress:

- 1 = no children
- 2 = elementary age children
- 3 = adolescent children
- 4 = preschool or more than three children.

Pilot study

A pilot study provided a test of the design and procedures proposed for the investigation. The questionnaire was given to twenty graduate counseling students. The questionnaire was presented to the students personally; it was self-administered and returned. There were six nonrespondents. When the nonrespondents were contacted, they stated that they did not have sufficient time to complete a questionnaire. Some minor changes in format resulted from this interchange along with an addition of a section for individual comments.

Procedure

The questionnaires were mailed with a cover letter describing the nature of the study (see Appendix A). The coded questionnaire was mailed in three mailings several days apart. The first 400 went to the rural females. Four days later, 200 went to the urban females. Eight days later, the remaining 200 forms were mailed to more urban females. As the questionnaires were returned, they were immediately scored, the corresponding name and address were identified on a coded list, the code number noted on a mailing list if there was a request for results, and boxed.

Within two weeks of the last mailing, the number of responses received per day diminished. Another questionnaire was sent to each of the nonrespondents. This questionnaire was identical to the first and included another cover letter (see Appendix A). This cover letter stressed the importance of their contribution and included a thank you in case they had already returned their form. All addresses of

respondents were retained since many of the respondents had requested the results of the survey.

Scoring

Scoring was completed by using ordered classifications. Having assigned the scores, the data can be thought of as x independent samples. Ordered classifications are common in the study of human behavior and preferences and whenever different degrees of some phenomenon can be recognized (Snedecor & Cochran, 1980).

The assignment of scores is appropriate when: 1) the phenomenon in question is one that could be measured on a continuous scale if the instruments were good enough and 2) the ordered classifications can be regarded as some kind of grouping of this continuous scale or as an attempt to approximate the continuous scale that is the best we can do with the present state of knowledge (Babbie, 1973).

Wherever necessary, dummy variables were used in computing scores. Likert-type scales were used for ordered scales, including all incorporated instruments. These instruments were scored according to their standardized instructions and the subsequent results used in the analysis.

Subjects

For the completion of this study it was necessary to determine a population and also to determine a method of choosing this population. The population was composed of a cross section of rural and urban adult women, including both wage earners and housewives.

Sample size was determined by computing the minimum number of subjects required in each cell when analyzing data. According to the power analysis procedure described by Cohen (1977), the minimum number of subjects necessary to reach power of .80 would be 12 per cell. This study utilized a target population of 23 per cell which required 805 subjects. The larger number was used anticipating a low return ratio due to the nature of the population pool.

Simple random sampling is seldom used in practice, since it is inefficient and very laborious if done manually. When a list of subjects is available researchers usually employ a systematic sampling method. With systematic sampling, every nth element in the total list is chosen for inclusion in the sample. To insure against possible human bias, the researcher selected the first element at random, resulting in a systematic sampling with a random start.

A sampling ratio was first determined for each of the areas, that is, estimating the population in comparison with the number of respondents desired. Then, the sampling interval was determined from this number to draw most evenly from the general population (Babbie, 1973). Alphabetized telephone lists from Hancock County, Iowa, and the city of Minneapolis, Minnesota, were used for this procedure.

There are difficulties inherent in obtaining a general-population sample, but this researcher felt this was important as most studies of women and work attitudes have been done among students in high school and universities, particularly those in psychology classes, recent graduates, or other sharply delineated populations. Babbie (1973)

states that our information concerning achievement motive is distorted by the practice of using college and high-school students for testing. Girls who go to college are more likely to have high achievement needs, so that girls who are not motivated towards achievement are less likely to be represented in the experimental groups.

Therefore, even though the difficulties in reaching a general population presented particular problems in identification, contact and response rate, it was decided that the profile of the general population was sufficiently important to risk the difficulties involved.

In summary, the population pool was a combination of rural and urban women without further restrictions. A wide range of occupations, educational levels, variations in family status, and other characteristics were present. The sample responded with information which was used for the project which is defined in detail below.

Design

This research was an exploratory study of females' occupational choices, work and organizational commitment, and variables which may affect these three factors. The statistical procedures used were analysis of variance, multivariate analysis of variance, and discriminant analyses using the following variables: residency, age, education, role stress, sex-role perception, risk-taking characteristics, marital status, children, and job level.

All the variables examined have been shown to exert some type of influence on women's choice and attitudes concerning work, but the indications of their effects have been contradictory or examined in a

limited population. These variables were used to estimate the probability of a given individual making a sex-appropriate career choice, degree of work commitment, and degree of organizational commitment.

Analysis of the Data

Several analyses were seen as appropriate when examining the data in this study. The purpose of the analyses was to determine whether specific characteristics of females were significant when considering their occupational choice, work commitment, and organizational commitment.

Initially, an analysis of variance was performed to indicate which factors might indicate a significant relationship to the following variables: females' occupational choice, work commitment and organizational commitment. This was followed by a multivariate analysis of variance as a preliminary indicator of possible significant subgroups within the list of factors. The analysis was completed by using a discriminant analysis procedure. The discriminant analysis was chosen as the primary analysis since the characteristics examined are interrelated in an individual's life and cannot be considered to be separate and independent elements.

Analysis of variance

An analysis of variance was one of the statistical procedures applied to the data in this study. Analysis of variance is a generalization of the two sample test for means and will test for the

significance of the difference based on sample means. When the analysis of variance procedure is extended to additional variables, a multivariate analysis of variance indicates which variables are significant when considered as a group. The F ratio was used to test the null hypothesis. The F ratio is a ratio between two variance estimates. F describes the variance based on between the mean differences within group variation. This ratio is a good criterion for testing the null hypothesis that the population means are the same in all classes (Snedecor & Cochran, 1980).

If the ratio is small, the two estimates agree closely. This means that the observed mean differences reflect nothing but sample variation from a single population with a single mean. The value of F should be around 1 when the null hypothesis holds and should become large when the means differ significantly. If the ratio is large, the notion must be entertained that the observed means differ so much that they may indicate actual differences in population value. The computer program used to carry out the analysis of variance was the Statistical Analysis Systems (Statistical Analysis System Institute, 1982).

Discriminant analysis

The discriminant analysis was employed to estimate the probability of an individual choosing a traditional, neuter, or nontraditional occupation, or belonging to other groups describing work attitudes. Discriminant analysis is a form of multivariate analysis, but differs in that it uses a total constellation of psychological, social, attitudinal, and statistical factors simultaneously. Discriminant

analysis is designed to answer the question "What group am I most like?" (Teideman, 1961). Groups in this case will be those of traditional, neuter, and nontraditional choices of career, and those with low to high work commitment and organizational commitment.

One of the advantages of discriminant function analysis is that it uses a minimum number of functions to discriminate between groups. Another advantage is that it will maximize the ratio of among means of groups sum of squares to within groups sums of squares. This maximization has the effect of spreading the means of the groups apart while simultaneously reducing the scatter of the individual points about their respective group means. Thus the distributions of scores for the various groups is reduced and the most distinct definition of the group is possible. The group means may be thought of as defining particular points in this multidimensional space representing the test variables. The discriminant function is a vector which indicates the direction of one population from another. Thus, groups of populations can be related. Individuals can then be assigned to one group with respect to all variables rather than in several groups which results when variables are considered separately.

For analyzing complex phenomena such as stereotypes, an appropriate but seldom used method of analyzing the relationships between sets of variables is canonical correlation. This is a form of multivariate analysis generalized to any number of criterion (dependent) variables (Kerlinger & Pedhazur, 1973).

The basic objective of canonical analysis is to determine the existence and describe the nature of any linear relationship between data sets. Canonical correlations are maximal linear relationships between the sets and are therefore likely to be overstated. Canonical correlation coefficients are appropriate for determining the existence of relationships between sets of variables (Adams, 1975). The computer program used to carry out the the discriminant analysis was the Statistical Package for the Social Sciences (SPSS) program. General information on using SPSS and SPSSX was obtained from a document prepared by Thomas, Warren, and Blaustein (1983).

FINDINGS

This research project examined female sex-appropriate career choices, work commitment, and organizational commitment as they relate to residency, age, education, role stress, sex-role perception, risk-taking characteristics, marital status, number, ages of children, and job level.

The data used for this study were obtained from questionnaires mailed to a general population. This questionnaire included questions concerning demographic data and incorporated standard instruments which evaluated sex-role perception, work commitment, organizational commitment, and three risk-taking characteristics: dominance, bold-adventurous, and liberality.

The research problem generated three major null hypotheses as well as twenty-seven subnull hypotheses. The subnull hypotheses are found in Appendix B.

The three major hypotheses are as follows:

Hypothesis 1. Females' choice of career as traditional, neuter, or nontraditional does not relate to the following variables, either singly, or as a set:

- (a) residency
- (b) age
- (c) education
- (d) role stress
- (e) sex-role perception
- (f) risk-taking characteristics
- (g) marital status
- (i) children
- (j) job level

Hypothesis 2. Females' degree of work commitment does not relate to the following variables, either singly, or as a set:

- (a) residency
- (b) age
- (c) education
- (d) role stress
- (e) sex-role perception
- (f) risk-taking characteristics
- (g) marital status
- (i) children
- (j) job level

Hypothesis 3. Females' degree of organizational commitment does not relate to the following variables, either singly, or as a set:

- (a) residency
- (b) age
- (c) education
- (d) role stress
- (e) sex-role perception
- (f) risk-taking characteristics
- (g) marital status
- (i) children
- (j) job level

The significant results of the statistical analyses relevant to each null hypothesis follow. A significance level at or beyond the .05 level of confidence was used for rejection of the null hypotheses. Other statistical tables related to these analyses are in Appendix C.

The following statistical analyses were carried out during the course of this investigation: 1) means and standard deviations, 2) a multivariate analysis of variance was completed to indicate relationships among the variables, and 3) discriminant analysis procedures.

The data will be described as follows. First, each statistical technique will be presented and the hypotheses stated. Second, the data used to test the relationships stated in the hypothesis will be presented. A summary of the findings for each hypothesis will be presented.

The remainder of this chapter will describe the results of these analyses.

Statistical Analyses

Description of population

Of the eight hundred females who had been identified as a target population, one hundred and eighty-two females responded with 164 completed usable questionnaires establishing an N of 164. Eighteen returns were excluded due to missing information and forty-seven questionnaires returned by the post office as nondeliverable. This resulted in a return of 23%.

The responding subjects were: 62.2% urban (102) and 37.8% rural (62), 65.2% homemakers and traditionally employed (105), 20.1% employed in a neuter occupation (33), and 14.6% nontraditionally employed (24).

Ages of subjects ranged between 20 and 86 years with specific ranges as follows: 29.9% ages 20 to 29 (49), 29.3% ages 30 to 39 (48), 25.6% ages 40 to 54 (42), and 15.2% 55 years and over (25).

Educational levels achieved were 28% completed high school (46), 32.9% received some college or additional training (54), 20.7% were college graduates (34), and 18.3% had advanced degrees (30).

Level of jobs was determined by classification according to the usual amount of education required for a position: 56.7% were employed at a level requiring a high school diploma (93), 14.0% were employed at a level requiring some further training (23), 18.9% were employed at a level requiring a college degree (31), and 10.4% were employed at a level requiring an advanced degree (17).

Marital status of the groups were as follows: 68.3% were married (112), 17.7% were divorced or widowed (29), and 13.4% were single (22).

Comparisons of groups as percentage of the population are given on Tables 1, 2, and 3. Percentages given have been adjusted for missing variables.

Analysis of Variance

An analysis of variance was performed on each stated hypothesis:

Hypothesis 1. Females' choice of career as traditional, neuter, or nontraditional does not relate to the following variables, either singly, or as a set:

- (a) residency
- (b) age
- (c) education
- (d) role stress
- (e) sex-role perception
- (f) risk-taking characteristics
- (g) marital status
- (i) children
- (j) job level

The means and standard deviations for the variables are shown in Table 4. The level of significance reported is .05.

Table 1

Description of demographic data

Group	N	Adjusted Percent
Residency		
Urban	102	62.2
Rural	62	37.8
Age		
20-29	49	29.9
30-39	48	29.3
40-54	42	25.6
55-85	25	15.2
Education		
High school	46	28.0
Additional	54	32.9
College degree	34	20.7
Advanced degree	30	18.3
Marital status		
Married	112	68.7
Div/widowed	29	17.8
Single	22	13.5
Children		
None	89	50.0
Elementary age	9	5.5
Adolescent age	24	14.6
Preschool/ more than three	49	29.9

Note: Adjusted percent: calculated on basis of missing variables.

Univariate tests applied to subscale scores indicated that subhypothesis 1a involving residency was rejected $p=.0001$ (see Table 5). Subhypothesis 1c involving education also was rejected $p=.0047$ (see Table 6). There were no significant differences on the subscales of age, role stress, marital status, sex-role perception, risk-taking characteristics, or ages and number of children.

Table 2

Description of dependent variables

Group	N	Adjusted Percent
Occupational choice		
Traditional	107	65.2
Neuter	34	20.1
Nontraditional	24	14.6
Work commitment		
Low	13	8.1
Average	70	43.5
High	78	48.4
Organizational commitment		
Low	10	6.5
Average	109	71.2
High	34	22.2

A further multivariate analysis of variance revealed a p value for the Hotelling-Lawley trace that was significant $F(16,286)=2.93$, $p=.0002$. When examining residency and education, the Duncan Multiple Range Test revealed significant mean differences between traditional choice and neuter or nontraditional choices. The variable residency indicated rural females choosing traditional occupations significantly more often than urban females, and females with higher educational achievement choosing nontraditional occupations.

In summary, those variables which relate significantly to occupational choice are residency and education.

The means and standard deviations for the variables are shown in Table 7. The level of significant reported is 0.05.

Table 3

Description of attitudinal data

Group	N	Adjusted Percent
Role stress		
Yes	88	56.1
No	69	43.9
Sex-role perception		
Feminine	75	45.7
Undifferentiated/ androgenous	50	30.5
Masculine	36	22.0
Risk characteristics		
Dominance		
Low	33	20.1
Average	96	58.5
High	35	21.3
Bold-adventurous		
Low	30	18.3
Average	95	57.9
High	39	23.8
Liberality		
Low	28	17.1
Average	86	52.4
High	50	30.5

Hypothesis 2. Females' degree of work commitment does not relate to the following variables, either singly, or as a set:

- (a) residency
- (b) age
- (c) education
- (d) role stress
- (e) sex-role perception
- (f) risk-taking characteristics
- (g) marital status
- (i) children
- (j) job level

Univariate tests applied to subscale scores indicated that subhypothesis 2a involving residency was rejected $p=.0427$ (see Table 8). Subhypothesis 2c involving education also was rejected $p=.0274$ (see

Table 9). Subhypothesis 2f involving dominance was rejected $p=.0185$, and liberality $p=.0156$ (see Tables 10 and 11). There were no significant differences on the subscales of age, role stress, marital status, sex-role perception, the risk-taking characteristic of bold-adventurous, or children.

Table 4

Occupational choice: Means and standard deviations

Source	Traditional N=107		Neuter N=33		Nontraditional N=24		
	Mean	S.D.	Mean	S.D.	Mean	S.D.	p
Residency	1.22	.42	1.67	.48	1.67	.48	.0001 *
Age	2.44	1.23	2.36	1.08	2.08	.93	.4006
Education	2.21	1.03	3.00	1.16	2.06	1.03	.0047 *
Role stress	1.50	.52	1.29	.46	1.42	.50	.1971
Marital status	1.42	.70	1.61	.79	1.50	.83	.6085
Sex-role perception	2.08	1.24	1.97	1.14	2.33	1.20	.4691
Dominance	1.95	.65	2.12	.54	2.12	.70	.3332
Bold	2.01	.65	2.33	.64	2.00	.61	.0987
Liberality	2.07	.70	2.29	.62	2.21	.65	.3420
Children	2.25	1.36	2.18	1.31	2.29	1.83	.9660
Job level	2.21	1.04	1.89	.97	2.95	1.04	.1327

* Denotes significance beyond the .05 level.

When examining residency, education, and the risk-taking characteristics of dominance and liberality, the Duncan Multiple Range

Test revealed significant mean differences between low work commitment groups and the average and high work commitment groups. Those females characterized by average or high work commitment are more apt to be urban, have more education, and score higher on the scales measuring the risk-taking characteristics of dominance and liberality, than those females with low work commitment.

Table 5

Analysis of variance of occupational choice by residency

Sources of variation	df	Mean Squares	F-Value	p
Residency	2	3.19	15.94	.0001 *
Error	151	0.20		

* Denotes significance beyond the .05 level.

Table 6

Analysis of variance of occupational choice by education

Sources of variation	df	Mean Squares	F-Value	p
Education	2	6.12	5.55	.0047 *
Error	151	1.10		

* Denotes significance beyond the .05 level.

Table 7

Work commitment: Means and standard deviations

Source	Low N=13		Average N=70		High N=78		p
	Mean	S.D.	Mean	S.D.	Mean	S.D.	
Residency	1.08	.28	1.43	.50	1.40	.49	.0427 *
Age	2.38	1.26	2.40	1.08	2.28	1.20	.9185
Education	1.69	.85	2.20	1.12	2.46	1.03	.0274 *
Role stress	1.62	.51	1.46	.53	1.40	.49	.3925
Marital status	1.69	.85	1.39	.67	1.50	.79	.2934
Sex-role perception	2.00	1.41	2.01	1.21	2.13	1.19	.9053
Dominance	1.62	.62	1.96	.62	2.14	1.64	.0185 *
Bold	1.85	.64	2.00	.64	2.15	.63	.1316
Liberality	1.62	.62	2.19	.62	2.17	.62	.0156 *
Children	2.23	1.42	2.21	1.34	2.32	1.34	.9885
Job level	1.46	1.09	1.90	1.09	1.82	1.08	.3905

* Denotes significance beyond the .05 level.

A further multivariate analysis of variance revealed a p value for the Hotelling-Lawley trace that was not significant $F(16,286)=1.43$, $p=.1256$.

In summary, those variables which relate significantly to work commitment are residency, education, and the risk-taking characteristics of dominance and liberality.

Table 8

Analysis of variance of work commitment by residency

Variable	df	Mean Squares	F-Value	p
Residency	2	0.75	3.22	.0427 *
Error	151	0.23		

* Denotes significance beyond the .05 level.

Hypothesis 3. Females' degree of organizational commitment does not relate to the following variables, either singly, or as a set:

- (a) residency
- (b) age
- (c) education
- (d) role stress
- (e) sex-role perception
- (f) risk-taking characteristics
- (g) marital status
- (i) children
- (j) job level

The means and standard deviations for the variables are shown in Table 12. The level of significance reported is 0.05.

Table 9

Analysis of variance of work commitment by education

Variable	df	Mean Squares	F-Value	p
Education	2	4.16	3.68	.0274 *
Error	151	1.13		

* Denotes significance beyond the .05 level.

Table 10

Analysis of variance of work commitment by dominance

Variable	df	Mean Squares	F-Value	p
Dominance	2	1.59	4.10	.0185 *
Error	151	0.39		

* Denotes significance beyond the .05 level.

Table 11

Analysis of variance of work commitment by liberality

Variable	df	Mean Squares	F-Value	p
Liberality	2	1.93	4.27	.0156 *
Error	151	0.45		

* Denotes significance beyond the .05 level.

Univariate tests applied to subscale scores indicated that subhypothesis 3f involving the risk-taking characteristic of dominance was rejected $p=.0178$ (see Table 13). The subhypothesis 3f involving the risk-taking characteristic of bold-adventurous was rejected $p=.0034$ (see Table 14). The subhypothesis involving job level was rejected $p=.0497$ (see Table 15).

There were no significant differences on the subscales of residency, age, education, stress, marital status, sex-role perception, the characteristic of liberality, or ages and number of children.

When examining the risk-taking characteristics of dominance and bold-adventurous, and job level, the Duncan Multiple Range Test revealed

significant mean differences between low and average organizational commitment groups and the high organizational commitment group. The high organizational commitment group scored significantly higher on scales measuring the risk-taking characteristics of dominance and bold-adventurous, and are more apt to occupy higher level occupations.

Table 12

Organizational commitment: Means and standard deviations

Source	Low N=10		Average N=34		High N=109		p
	Mean	S.D.	Mean	S.D.	Mean	S.D.	
Residency	1.40	.52	1.41	.50	1.40	.49	.8525
Age	2.50	1.27	2.50	1.14	2.22	1.13	.3185
Education	1.70	1.06	2.71	.94	2.23	1.09	.1188
Role stress	1.55	.53	1.38	.49	1.44	.52	.6187
Marital status	1.70	.83	1.41	.74	1.45	.75	.9040
Sex-role perception	1.78	1.20	1.94	1.04	2.11	1.25	.6612
Dominance	1.90	.87	1.99	.60	2.26	.62	.0178 *
Bold	1.80	.79	1.97	.63	2.41	.56	.0034 *
Liberality	2.20	.62	2.09	.70	2.32	.64	.1277
Children	2.10	1.45	2.14	1.28	2.33	1.35	.5868
Job level	1.50	1.08	1.77	1.04	2.21	1.17	.0497 *

* Denotes significance beyond the .05 level.

Table 13

Analysis of variance of organizational commitment by dominance

Variable	df	Mean Squares	F-Value	p
Dominance	2	1.56	4.15	.0178*
Error	151	0.38		

* Denotes significance beyond the .05 level.

A further multivariate analysis of variance revealed a p value for the Hotelling-Lawley trace that were not significant $F(16,286)=1.43$, $p=.1256$.

Table 14

Analysis of variance of organizational commitment by bold-adventurous

Variable	df	Mean Squares	F-Value	p
Bold-adventurous	2	2.29	5.93	.0034*
Error	151	0.38		

* Denotes significance beyond the .05 level.

In summary, those variables which relate significantly to organizational commitment are the risk-taking characteristics of dominance and bold-adventurous, and job level.

Table 15

Analysis of variance of organizational commitment by job level

Variable	df	Mean Squares	F-Value	p
Job level	2	3.55	3.06	.0497 *
Error	151	1.16		

* Denotes significance beyond the .05 level.

Discriminant Analysis

Occupational choice

A multiple discriminant analysis was performed to determine how well the variables listed below could predict occupational choice as described as traditional, neuter, or nontraditional.

Hypothesis. Females' choice of career as traditional, neuter or nontraditional does not relate to the following variables as a set:

- (a) residency
- (b) age
- (c) education
- (d) role stress
- (e) sex-role perception
- (f) risk-taking characteristics
- (g) marital status
- (i) children
- (j) job level

This research problem was examined by a discriminant analysis involving a stepwise variable selection followed by canonical discriminant functions. The degree to which these variables relate to career choice can be seen in examining how well they can predict group membership. Significant variables are seen on Table 16.

Table 16

Discriminant analysis of occupational choice: Significant variables

Step	Wilks' Lambda	Significance
1 Residency	0.816648	0.0000
2 Education	0.768325	0.0000
3 Role stress	0.749497	0.0000
4 Bold-adventurous	0.736795	0.0000

The steps involved in this discrimination resulted in four significant variables: that of residency, education, role stress and the risk-taking characteristic of bold-adventurous.

The classification function coefficients of the traditional choice group in order of predictive weights are role stress, 7.791388, and residency, 5.704985. For the group with choice of neuter occupation the largest predictive weights are residency, 8.016868, and role stress, 6.959197. For the group with the nontraditional occupational choice, the greatest predictive weights are roles stress, 7.905189, and residency, 7.652155 (see Table 17).

The factors which relate to choice of occupation to the greatest degree are those of residency and role stress. This is constant for all three occupational groups. While the factors of education and the risk-taking characteristic of bold-adventurous are significant, this is most evident in the nontraditional occupational choice.

Table 17

Discriminant analysis of occupational choice: Classification function coefficients

Occupation:	Traditional	Neuter	Non-traditional
Residency	5.704985 *	8.016868 *	7.652155 *
Education	2.070554	1.689301	2.553515
Role stress	7.791388 *	6.959197 *	7.905189 *
Bold-adventurous	4.781987	4.759022	5.379212
(Constant)	-17.58540	-18.91906	-23.12774

* Largest function coefficients.

Both discriminant functions were significant ($p < 0.01$). Function 1 accounted for 72.33% of the variance (Chi-square=46.58, $F=0.0000$), and Function 2 accounted for 27.67% (Chi-square=13.51, $F=0.0037$).

Group centroids were obtained for the three occupational groupings. These centroids were obtained by multiplying each group mean by the appropriate coefficient to predict a mean discriminant score on Function 1 for each group, respectively, and to predict a mean discriminant score on Function 2 for each group. Function 1 for Group 1 was -0.35787 and Function 2 was -0.00109. Function 1 for Group 2 was 0.66725 and Function 2 was -0.44612. Function 1 for Group 3 was 0.65910 and Function 2 was 0.58085 (see Table 18).

These centroids are compared so that their relative relationship with occupational choice can be determined and an estimate of classification ability can be computed.

Table 18

Discriminant analysis of occupational choice: Canonical discriminant functions evaluated at group means

Group	Function 1	Function 2
1	-0.35787	-0.00109
2	0.66725	-0.44612
3	0.65910	0.58085

Table 19 shows that the use of these centroids correctly classified 65.61% of the cases in groups designated as traditional (1), neuter (2), and nontraditional (3). The variables selected for the study were therefore valuable in discriminating between the groups.

Table 19

Discriminant analysis of occupational choice: Classification results

Actual Group	No. Cases	Predicted Group Membership		
		1	2	3
Group 1	102	74 72.5%	16 15.7%	12 11.8%
Group 2	31	10 32.3%	16 51.6%	5 16.1%
Group 3	24	7 29.2%	4 16.7%	13 54.2%

Note: percent of "Grouped" Cases Correctly Classified = 65.61%.

The scatter plot of the resulting evaluated functions indicates discrimination between the traditional, neuter, and nontraditional

choices of the females represented in this study.

Figure 1 provides a more graphic example of the discriminating power of these centroids.

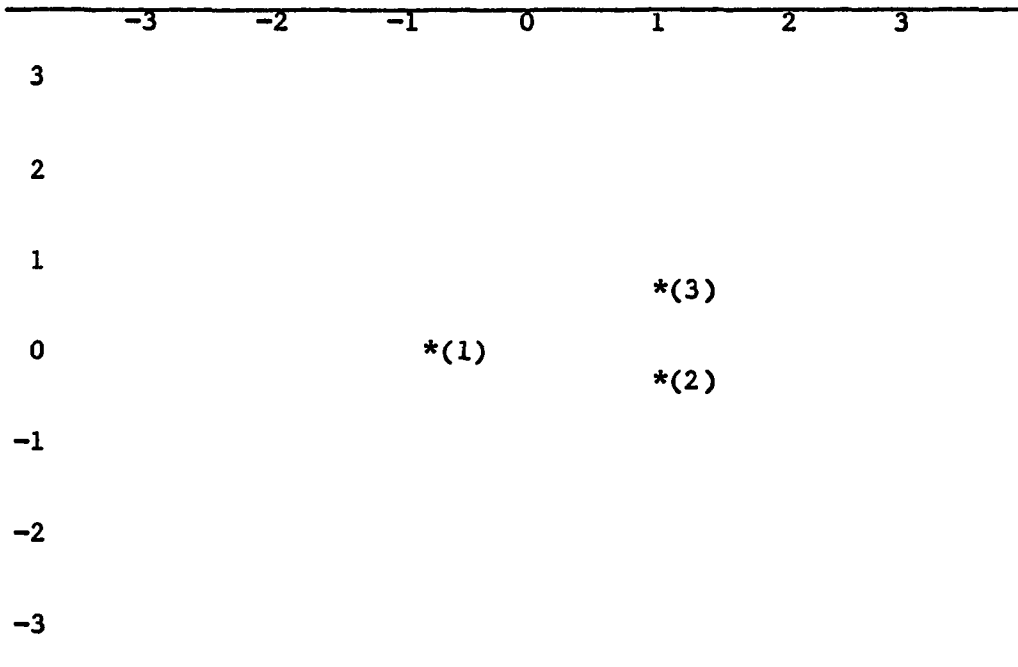


Figure 1. Centroids for occupational choice

The results reported have provided the desired information about the sex-appropriate occupational choice and determined group membership using the selected variables. The significant variables which predicted group membership as indicated by traditional, neuter or nontraditional occupational choice were those of residency, education, role stress, and the risk-taking characteristic of bold-adventurous.

Work commitment

The second major research question involved prediction of membership in three groups described by degree of work commitment indicated by females using the Work Attitudes Scale.

Hypothesis 2. Females' degree of work commitment does not relate to the following variables as a set:

- (a) residency
- (b) age
- (c) education
- (d) role stress
- (e) sex-role perception
- (f) risk-taking characteristics
- (g) marital status
- (i) children
- (j) job level

This research problem was examined by a discriminant analysis involving a stepwise variable selection followed by canonical discriminant functions. This multiple discriminant analysis was performed to determine how well the specific variables could predict membership in groups designated as low, average, and high work commitment.

The scatter plot of the resulting evaluated functions indicates discrimination between the degree of work commitment of females represented in this study.

The degree to which these variables relate to work commitment can be seen in examining how well they can predict group membership.

The steps involved in this discrimination resulted in six significant variables: risk-taking characteristics of dominance and liberality, education, job level, occupational choice, and residency. For representation of results, see Table 20.

The classification function coefficients of the group with low work commitment in order of largest predictive weights are the risk-taking characteristic dominance, 2.979249, and residency, 2.138946. For the group with average work commitment, the largest predictive weights are residency, 3.443749, and the risk-taking characteristic of dominance, 3.395853. For the group with high work commitment, the largest predictive weights are the risk-taking characteristic of dominance, 3.933851, and residency, 2.917897 (see Table 21).

Table 20

Discriminant analysis of work commitment: Significant variables

Step		Wilks' Lambda	Significance
1	Dominance	.94687	.0153
2	Liberality	.91593	.0095
3	Education	.89325	.0067
4	Job level	.85811	.0061
5	Choice	.84582	.0048
6	Residency	.82496	.0040

Function 1 of the discriminant functions was significant. This function accounted for 64% of the variance (Chi-square=28.96, F=0.0040). Function 2 accounted for only 36% of the variance which resulted in a chi-square of 10.6 (F=0.0599). Although this is not within the $p < 0.05$ range, it does suggest a possibility that Function 2 may influence group membership.

Table 21

Discriminant analysis of work commitment: Classification function coefficients

Commitment level:	Low	Average	High
Residency	2.138946 *	3.443749 *	2.917897 *
Education	1.310087	1.639810	2.205498
Choice	1.652183	1.189562	1.803450
Dominance	2.979249 *	3.395853 *	3.933851 *
Liberality	1.984717	2.833880	2.718745
Job level	-.949952	-.999638	-1.574129
(Constant)	-7.817868	-11.74035	-13.02252

* Largest function coefficients.

Group centroids were obtained for the three groups describing degrees of work commitment. These centroids were obtained by multiplying each group mean by the appropriate coefficient to predict a mean discriminant score on Function 1 for each group respectively and by multiplying each group mean by the appropriate coefficient to predict a mean discriminant score on Function 2 for each group. Function 1 for Group 1 was 0.90057 and Function 2 was -0.57534. Function 1 for Group 2 was -0.17181 and Function 2 was 0.27573. Function 1 for Group 3 was 0.31189 and Function 2 was -0.15027 (see Table 22).

These centroids are compared so that their relative relationship with work commitment groups can be determined and an estimate of classification ability can be computed.

Table 22

Discriminant analysis of work commitment: Canonical discriminant functions evaluated at group means

Group	Function 1	Function 2
1	-0.90057	-0.57534
2	-0.17181	0.27573
3	0.31189	-0.15027

Table 23 shows that the use of these centroids correctly classified 51.55% of the cases. The variables residency, occupational choice, job level, education, and the risk-taking characteristics of dominance and liberality were therefore valuable in discriminating between those groups defined by low (1), average (2), or high (3) degree of work commitment.

The scatter plot of the resulting evaluated functions indicates discrimination between low, average, and high groups of females' work commitment represented in this study. For a more graphic picture of the results of discrimination classification see Figure 2, showing the discriminating power of these centroids.

The results reported have provided the desired information about the degree of work commitment of the three groups and determined group membership using the selected variables. The significant variables which predicted this group membership were those of residency,

Table 23

Discriminant analysis of work commitment: Classification results

Actual Group	No. Cases	Predicted Group Membership		
		1	2	3
Group 1	13	9 69.2%	2 15.4%	2 15.4%
Group 2	70	21 30.0%	29 41.4%	20 28.6%
Group 3	78	17 21.8%	16 20.5%	45 57.7%
Ungrouped cases	3	2	0	1

Note: Percent of "Grouped" Cases Correctly Classified = 51.55%.

education, job level, occupational choice and the risk-taking characteristics of dominance and liberality.

Organizational commitment

A multiple discriminant analysis was performed to determine how well the variables listed below predict group membership representing the degree of organizational commitment by the female population investigated.

Hypothesis 3. Females' degree of organizational commitment does not relate to the following variables as a set:

- (a) residency
- (b) age
- (c) education
- (d) role stress
- (e) sex-role perception
- (f) risk-taking characteristics
- (g) marital status

(i) children
(j) job level

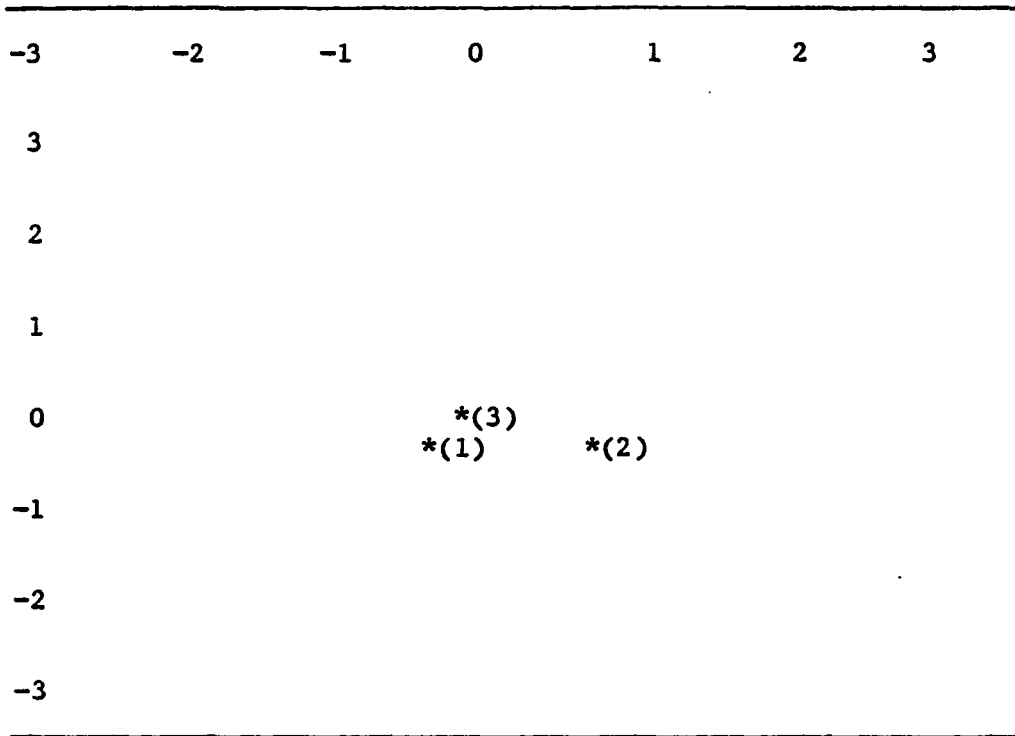


Figure 2. Centroids for work commitment

The degree to which these variables relate to degree of organizational commitment can be seen in examining how well they can predict group membership.

The steps involved in this discrimination resulted in four significant variables, that of education, age, and the risk-taking characteristics of dominance and bold-adventurous. These data are presented in Table 24.

Function 1 of the discriminant functions was significant. This function accounted for 95.1% of the variance (Chi-square=23.129,

F=0.0032). Function 2 accounted for only 4.55% of the variance which resulted in a chi-square of 1.2009 (F=0.7528).

Table 24.

Discriminant analysis of organizational commitment: Significant variables

Step	Wilks' Lambda	Significance
1 Dominance	.92103	.0025
2 Education	.88569	.0014
3 Age	.86877	.0024
4 Bold-adventurous	.85209	.0032

The classification function coefficients of the low organizational commitment group in order of predictive weights are the risk-taking characteristics of dominance, 3.969883, and bold-adventurous, 3.359348. For the group with average organizational commitment, the largest predictive weights are the risk-taking characteristics of dominance, 4.521330, and bold-adventurous, 3.262455. For the group with high organizational commitment, the greatest predictive weights are the risk-taking characteristics of dominance, 5.053039, and bold-adventurous, 4.128036 (see Table 25).

Group centroids were obtained for the three degrees of of organizational commitment. These centroids were obtained by multiplying each group mean by the appropriate coefficient to predict a mean discriminant score on Function 1 for each group, respectively, and to predict a mean discriminant score on Function 2 for each group. For

Group 1, Function 1 was -0.57677 and Function 2 was 0.33206. For Group 2, Function 1 was -0.17242 and Function 2 was -0.03988. For Group 3, Function 1 was 0.74415 and Function 2 was 0.04120 (see Table 26).

Table 25

Discriminant analysis of organizational commitment: Classification function coefficients

Commitment level	Low	Average	High
Age	3.170169	3.184488	3.59159
Education	1.567402	1.979844	2.396634
Dominance	3.969883 *	4.521330 *	5.053039 *
Bold-adventurous	3.359348 *	3.262455 *	4.128036 *
(Constant)	-12.72521	-14.41962	-19.41501

* Largest function coefficients.

Table 26

Discriminant analysis of organizational commitment: Canonical discriminant functions evaluated at group means

Group	Function 1	Function 2
1	-0.57677	0.33206
2	-0.17242	-0.03988
3	0.74415	0.04120

Table 27 shows that the use of these centroids correctly classified 45.75% of the cases. The variables listed above were therefore valuable in discriminating between those groups defined by degree of

organizational commitment.

The scatter plot of the resulting evaluated functions indicates discrimination between groups of low (1), average (2), and high (3) females' organizational commitment represented in this study. For a more graphic picture of the results of discrimination classification, see Figure 3 showing the discriminating power of these centroids.

Table 27

Discriminant analysis of organizational commitment: Classification results

Actual Group	No. Cases	Predicted Group Membership		
		1	2	3
Group 1	10	5 50.0%	4 40.0%	1 10.0%
Group 2	109	34 30.0%	44 41.4%	31 28.6%
Group 3	11	6 17.6%	7 20.6%	21 61.8%
Ungrouped cases	11	6	2	3

Note: Percent of "Grouped" Cases Correctly Classified = 45.75%.

The results reported have provided the desired information about the degree of work commitment of the three groups and determined group membership using the selected variables. The significant variables which predicted this group membership were those of age, education, and the risk-taking characteristics of dominance and liberality.

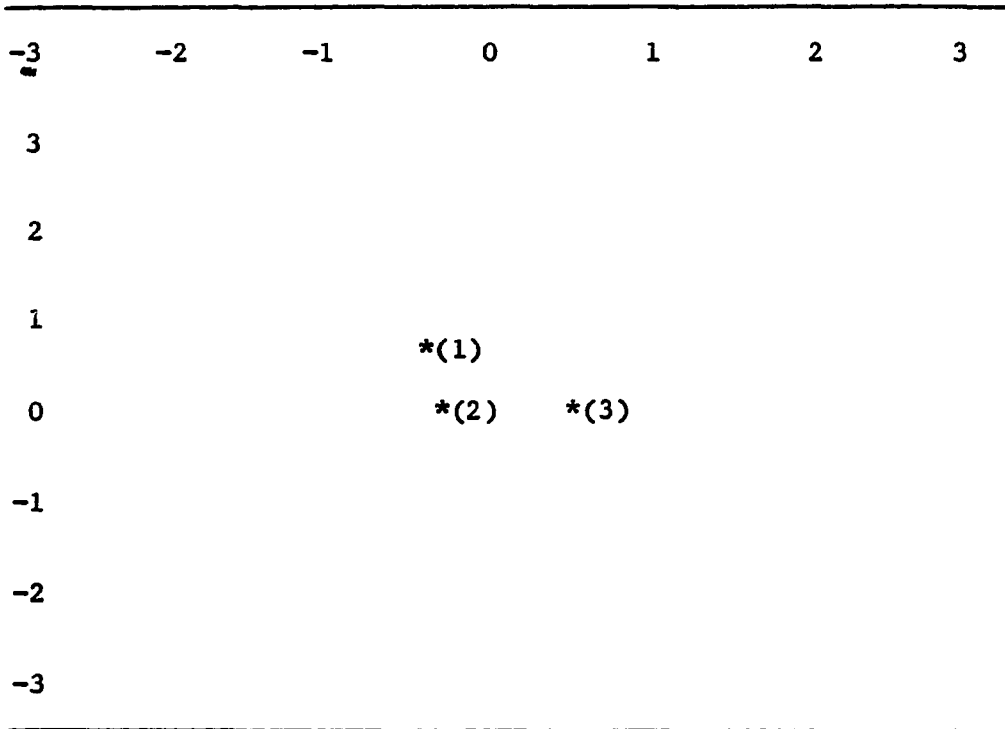


Figure 3. Centroids for organizational commitment

Summary

The results of the analysis of variance indicate that the factors residency and education relate to females' occupational choice. Residency, education, and the risk-taking characteristics of dominance and liberality related to the degree of females' work commitment described as low, average, or high level of commitment. Job level, and the risk-taking characteristics of dominance and bold-adventurous related to the females' organizational commitment described as low, average, or high level of commitment.

The results of the discriminant analysis reported have provided the desired information about the group membership in the area of females'

occupational choice, as traditional, neuter, or nontraditional, using the selected variables. The significant variables which predicted this group membership were those of residency, education, role stress and the characteristic bold-adventurous.

The results of the discriminant analysis reported have provided the desired information about the group membership in the area of females' degree of work commitment, as low, average or high groups, using the selected variables. The significant variables which predicted this group membership were those of education, occupational choice, the risk-taking characteristics of bold-adventurous and liberality, and job level.

The results of the discriminant analysis have provided the desired information about the group membership in the area of organizational commitment, as low, average, or high groups, using the selected variables. The significant variables which predicted this group membership were those of age, education, and the risk-taking characteristics of dominance and bold-adventurous.

Eighteen returns were excluded due to missing information and forty-seven questionnaires were returned by the post office as non-deliverable. This resulted in a return of 23%. This rate of return may have affected the results of this study. The descriptive percentages of this group indicates this group as slightly older and better educated than an actual general population when compared to the United States Census Report. This discrepancy must be considered when reviewing the results of the present study.

The group of factors in this study which appear to influence females' choice of careers, work commitment and organizational commitment included residency, age, education, role stress and the characteristics dominance, bold-adventurous, and liberality. These factors, as well as the nonsignificant factors, will be considered in sequence, and the interaction of these factors will be discussed. These factors do not exist separately in an individual's life, and so have been analyzed as a group, and must be considered here as a set.

SUMMARY

Introduction

This research project examined females' sex-appropriate occupational choices, work commitment, and organizational commitment as they relate to residency, age, education, role stress, sex-role perception, risk-taking characteristics, marital status, number and ages of children, and job level.

The present study was designed to investigate characteristics which may influence women's work. This includes choice of work and work attitudes. The subjects were selected from the general population in urban and rural areas of the middle west. A total of 164 females completed and returned the questionnaires.

The subjects completed questionnaires related to their education, type of work, and age. Marital status, the number and ages of children, and their subjective evaluation of time spent in work as opposed to other activities were ranked and scored according to the probable degree of stress associated with these factors. Sex-role perception, work commitment, organizational commitment, and three characteristics associated with risk-taking were assessed by incorporating standard instruments within the questionnaire. These instruments were the Bem Sex Role Inventory, the Lodahl and Kejner Work Attitudes Scale, the Cook and Wall Organizational Commitment Measure, and three subscales of the 16 Personality Factors inventory which involved risk-taking characteristics of dominance, bold-adventurous, and liberality. The

demographic and attitudinal information were then used in the analysis which compared these females as groups. The groups were defined as 1) occupational choice: traditional, neuter, and nontraditional; 2) degree of work commitment: low, average, and high; and 3) degree of organizational commitment: low, average, and high.

Eighteen returns were excluded due to missing information and forty-seven questionnaires were returned by the post office as non-deliverable. This resulted in a return of 23%. This rate of return may have affected the results of this study. The descriptive percentages of this group indicates this group as slightly older and better educated than an actual general population when compared to the 1980 United States Census Report. This discrepancy must be considered when reviewing the results of the present study.

The relevant research reviewed theories of vocational choice, human development theory and trait-factor theory as the basis for understanding vocational behavior. Additional studies reviewed residency, age, education, role stress, sex-role perception, risk-taking characteristics, marital status, and similar factors relating to work involvement.

The results of this study are summarized in this chapter by the type of statistical analysis utilized. With each type of analysis, the major null hypotheses and findings will be reported. The discussion section is organized around the factors (variables) examined in this study.

Summary of Results of the Analysis of Variance

Hypothesis 1

Females' choice of career as described in terms of traditional, neuter, and nontraditional choices, does not relate to the following variables, either singly, or as a set:

- (a) residency
- (b) age
- (c) education
- (d) role stress
- (e) marital status
- (f) sex-role perception
- (g) risk-taking characteristics
- (h) children
- (i) job level

Significant variables The subnull hypotheses involving females' occupational choices and the variables of residency ($p=0.0001$), and education ($p=0.0047$) were rejected.

Nonsignificant variables The subnull hypotheses involving females' occupational choices and the variables of age, role stress, marital status, sex-role perception, risk-taking characteristics, children, and job level were not rejected.

Hypothesis 2

Females' work commitment does not relate to the following variables, either singly, or as a set:

- (a) residency
- (b) age
- (c) education
- (d) role stress
- (e) marital status
- (f) sex-role perception
- (g) risk-taking characteristics

- (h) children
- (i) job level

Significant variables The subnull hypotheses involving females' degree of work commitment and the variables of residency ($p=0.0427$), education ($p=0.0274$), and the risk-taking characteristics of dominance ($p=0.0185$) and liberality ($p=0.0156$) were rejected.

Nonsignificant variables The subnull hypotheses involving females' degree of work commitment and the variables of age, role stress, marital status, sex-role perception, the risk-taking characteristic of bold-adventurous, and children were not rejected.

Hypothesis 3

Females' organizational commitment does not relate to the following variables, either singly or as a set:

- (a) residency
- (b) age
- (c) education
- (d) role stress
- (e) marital status
- (f) sex-role perception
- (g) risk-taking characteristics
- (h) children
- (i) job level

Significant variables The subnull hypotheses involving females' organizational commitment and the risk-taking characteristics of dominance ($p=0.0178$), bold-adventurous ($p=0.0034$), and job level ($p=0.0497$) were rejected.

Nonsignificant variables The subnull hypotheses involving females' organizational commitment and the variables of residency, age, role stress, sex-role perception, the risk-taking characteristic of

liberality, marital status, and children were not rejected.

Summary of Results of the Discriminant Analysis

A discriminant analysis was performed with each major hypothesis. These included occupational choice, work commitment and organizational commitment. A brief summary of results are given below.

Hypothesis 1

Females' choice of career as described in terms of traditional, neuter, and nontraditional choices, does not relate to the following variables as a set:

- (a) residency
- (b) age
- (c) education
- (d) role stress
- (e) marital status
- (f) sex-role perception
- (g) risk-taking characteristics
- (h) children
- (i) job level

The discriminant analysis predicted membership in traditional, neuter, and nontraditional occupational groups with 65.61% accuracy. The factors residency, education, role stress, and the risk-taking characteristic of bold-adventurous were significant in predicting this choice of career.

Hypothesis 2

Females' work commitment does not relate to the following variables as a set:

- (a) residency
- (b) age
- (c) education

- (d) role stress
- (e) marital status
- (f) sex-role perception
- (g) risk-taking characteristics
- (h) occupational choice
- (i) job level

The discriminant analysis predicted membership in low, average, and high work commitment groups with 51.55% accuracy. The factors residency, education, occupational choice, job level, and the risk-taking characteristics of dominance and liberality were significant in the prediction of females' work commitment.

Hypothesis 3

Females' organizational commitment does not relate to the following variables as a set:

- (a) residency
- (b) age
- (c) education
- (d) role stress
- (e) marital status
- (f) sex-role perception
- (g) risk-taking characteristics
- (h) children
- (i) job level

The discriminant analysis predicted membership in low, average, and high organizational commitment groups with 47.75% accuracy. The factors age, education, and the risk-taking characteristics of dominance and bold-adventurous were significant in predicting females' organizational commitment.

Discussion

The group of factors in this study which appear to influence females' choice of careers, work commitment and organizational

commitment included residency, age, education, role stress, the risk-taking characteristics of dominance, bold-adventurous, and liberality, and job level.

These factors, as well as the nonsignificant factors, will be considered in sequence, and the interaction of these factors, in combination, will be discussed. These factors do not exist separately in an individual's life, and so have been analyzed as a group, and should be considered here as a set.

Residency

The factor residency was significant in both statistical analyses. It was the primary determiner of inclusion into groups using the first function in the discriminant analysis. It was expected that urban females would be more apt to choose nontraditional work due to several interrelated factors. There is generally more educational opportunities available in urban areas, including access to technical schools, more occupations available, and possibly a less conservative attitude concerning work and sex roles (Sweet, 1973). Due to concentration of population, there are also likely to be more nontraditional role models. In addition to differences in existing opportunities, females are less likely to move to areas with greater occupational opportunities. Research indicates that females are more likely to allow place of residence to determine job opportunities (Ferber, 1982).

While it can be assumed that females may aspire to various occupations without geographical considerations, it would seem that the proportionately smaller number of nontraditional models and

opportunities in the rural areas would decrease the likelihood of nontraditional choices. On the other hand, many rural girls are active, take part in sports and report a 'tomboy' type of childhood. This is one factor influencing nontraditional choice of work and may limit the effects of isolation.

Residency was a significant variable in determining group membership in work commitment with more urban females demonstrating increased work commitment. Urban areas may present more positive role models, wider occupational opportunities and a more positive social attitude towards working females. This would allow urban females to express interest in work more readily than rural females who are aware of the limitations placed upon them by their geographical isolation. Brown (1981) indicates residency in rural areas relates to decreased opportunities for achievement.

Age

Age was not included in the set of identifying variable in the prediction of occupational choice in either statistical analysis. This could indicate that as females proceed through their career patterns, they will enter occupations associated with either sex upon other considerations rather than age. In other words, older females are no more inclined to choose traditional careers than younger ones. This was anticipated as older females have been described as more independent in judgment and less inclined to be influenced by stereotypical expectations (Farmer & Fyans, 1983). The decreased role as primary caretaker within the family of older females allows more resources to be

invested elsewhere. In addition, research suggests that older females are as likely to exhibit risk-taking characteristics as younger females, allowing them to move into occupations which involve social risk. Age was not included in the set identifying degree of work commitment. That is, older females are as apt to be as involved in work as younger females. This was anticipated as older reentry females have been assumed to follow the same career pattern as younger females, with the initial years of intense involvement at the initial work stage. As the females' family roles change there is additional time and energy to be spent on work. They are also seen to be more independent in judgment and therefore have less need to meet traditional expectations. An additional impetus towards increased work commitment as the person grows older was explained by both Super (1977) and Hall (1972) who asserted that the synthesis between an individual's self identity and his career or career role develops over a period of time. As this identification with the work role becomes increasingly important so does the work role itself.

Age of the female was included in the set predicting organizational commitment. Hrebiniak and Alutto (1978) have shown commitment was related to age with the older employee being more involved. This may be due to decreased attractiveness of the employee to other organizations. It may also result from changing from one workplace to another by those individuals who are less committed, leaving those who are more compatible and identify more strongly with the original organization (Welsch & LaVan, 1981). Organizational commitment is a complex issue with a

possibility that older females with less education, and fewer family demands tend to have greater organizational commitment.

Education

Education was a significant factor in both statistical analyses. It was the primary significant variable in the second function in predicting occupational choice. Education and job level will be considered here together as they are interconnected. The more education a female has the more likely she will be working (Schiffler, 1975). Generally females have fewer occupational choices than their male counterparts, just as they tend to have less advanced education (Ferber, 1982). Females' increased participation in paid work may relate to utilization of advanced education and specialized training. Additional education is needed for many nontraditional occupations and increased numbers of females are entering those professions which require more education. Females may not only be more willing to invest in additional education, but also may have developed from an active, 'tomboy' childhood associated with academic competency (Gray, 1983).

Education was included in the set predicting organizational commitment. This negative relationship may be anticipated from the research of Morris, Steers, and Koch (1979b) who indicated a relationship between the need for a secure organizational position in lower educational and skill levels.

A higher level of education may have a limiting effect on organizational commitment due to increased attractiveness of the individual to other organizations, and also due to the conflict

described by some studies between an individuals' professional commitment and organizational commitment (Argyris, 1964). In specific fields, such as medicine, nursing, law, and business, the educational process seems to encourage growth of such professional identification.

Many of the professional and highly skilled occupations have been considered "masculine" areas of work. These occupations are often characterized by greater educational requirements and higher status of job level. The workers in those occupations are often assumed to have "masculine" characteristics such as a competitive spirit and the ability to focus on long-term goals (Fuchs, 1975).

The level of education relates to organizational commitment in studies of male work attitudes. It appears that organizational commitment increases when the individual perceives that organization as being a source of important rewards and that there would be a decreased opportunity to obtain those rewards elsewhere.

Role stress

Role stress was the third variable in the set which predicted the membership in traditional, neuter, or nontraditional occupations. Role stress was not seen as significant in the analysis of variance. The relationship between role stress and occupational choice should not be interpreted as a cause and effect relationship, as role stress is often experienced by females occupying divergent roles seen by them and others as being discrepant from societal expectations.

Role stress experienced in nontraditional occupations may develop from conflict with societal expectations, conflicts with work mates,

self-imposed expectations of superior performance, and/or greater demands of some nontraditional jobs.

Noting the greater number of females with nontraditional occupations have urban residency, factors which may compensate for the role stress include increased facilities for child care, and the other, primarily urban, resources. Poloma (1978) indicated that professional females in medicine, law, and engineering were not subject to additional role stress, citing compensating factors such as decreased involvement with long term work goals.

Conversely, the role stress of traditionally employed, and less urban, females may result from more restricted occupation choices, more restricting peer expectations, and, generally, fewer available resources for the maintenance of multiple roles.

Role stress was not included in the set relating to work commitment. Reentry females experienced conflict and guilt about leaving their homes and families to undertake a time-consuming venture so personally fulfilling as the return to college (Astin, 1976). Tittle and Denker (1977) find home/career conflict continues to be an important mediator of work commitment for reentry females, but the effects on motivation are unclear.

The failure to show relationship in this study between work commitment and role stress may indicate that females who have found ways to cope with work related conflicts no longer view them as stressful, or believe that stress is unavoidable and therefore not significant, or is hesitant to admit to difficulties in balancing various role demands and

fail to meet the "supermom" model presented to working females.

Role stress was not included in the set predicting organizational commitment in this study, although Bhagat and Chassie (1981) found satisfaction with promotion as positively related to organizational commitment and experienced role stress as an important negative predictor of commitment in the working females. Gordon and Strober (1975) have pointed out the need for working females to improve management of conflicting role related demands. Ritzer (1977) noted that females in upper levels of the organization tended to experience a significant greater amount of role stress due to conflicting demands on their time and energy. Given these assessments and empirical findings on the need of females for effective role management, the negative influence of role stress is likely although in the present study it was not a significant variable.

Sex-role perception

Sex-role perception was not found to be a significant factor in either analysis. From prior studies it was assumed that females with a more feminine sex-role perception would be more apt to choose traditional careers. According to Bem's (1974) sex-role self-concept theory, it was predicted that females with androgenous or masculine identities would be likely choose nontraditional careers, while the females who indicated a feminine sex-role perceptual stance would choose traditional occupations or describe themselves as housewives. One explanation may be that females with androgenous or masculine characteristics are employed in traditional occupations because of the

relative ease of obtaining work in these areas, and strength of societal expectations, while their needs for other activities are expressed in other ways, e.g., competitive sports participation (Maccoby & Jacklin, 1974).

Sex-role perception was not found to be an indicator related to organizational commitment in this study. Hall, Schneider, and Nygren (1970) describe the increase in organizational commitment as correlating with increased personal service, broader outlook, and concern with helping others which describes a career stage which is increasingly androgenous in character. Thus the relationship between sex-role perception and organizational commitment may reflect increasing androgeny with age.

The assumed dependency attributed to females may suggest a higher degree of organizational commitment, implying that females with increased feminine identification would be appear higher in organizational commitment. Studies have shown that men who have been found to have a high degree of organizational commitment are those with dependency needs. The increasing needs for security would also influence this dependency as the worker grew older. The issue of dependency may cloud the assessment of organizational commitment for females, as this is an assumed characteristic she may reject as she ages. Bhagat and Chassie (1981) have found in their studies personal characteristics were not related to commitment. It appears there are a large number of possible personal and situational factors, any of which may influence the degree of organizational commitment or cancel other influences.

Risk-taking characteristics

The risk-taking characteristic of bold-adventurous was included in the set which was significant in the discrimination of occupational choice, although it was not significant in the analysis of variance. It was assumed that a choice of a nontraditional career involves additional stress due to societal and peer attitudes, difficulty in development of specific skills, difficulty in actually obtaining a position and meeting what may be an increased level of expectations. This hypothesis may not have been supported as a result of reduced availability of nontraditional choices, so that females who are more inclined to take risks will be compelled to enter traditional occupations. The literature indicates that the choice of a nontraditional occupation is sufficiently risky in itself and further expression of those characteristics associated with risk were not necessary.

For similar reasons, it might be assumed that the risk-taking characteristic of bold-adventurous will relate to occupational choice, assuming that there will be some risk in the relationships and acceptance of others, the difficulties involved in meeting education and role expectations, and for many occupations, increased challenge and responsibility.

The analysis of variance indicated the risk-taking characteristics of dominance and liberality as significant factors involved in work commitment. Females who are more assertive, competitive, independent minded, free thinking, and innovative tend to find work more central to their lives. This is a logical association as females who are less apt

to follow traditional expectations for females' roles would tend to possess these characteristics.

The risk-taking characteristic of bold-adventurous is logically related to organizational commitment in a negative direction, as the organization may be perceived as the stable element in the person's worklife and a source of security. Dominance is further described as assertive, competitive, independent minded and authoritative. There would appear to be a logical relationship between these particular characteristics and a high priority placed on work. These characteristics are those which might describe a person who is less apt to be influenced by social pressure toward the customary nonwork role which is assigned to females.

Marital status

Marital status was not found to be a significant factor in determining occupational choice. The relationship between marriage and occupational choice may not follow an anticipated pattern. Research indicated that females in nontraditional occupations tend to remain single, or remain single longer. Failure to find this in a group may reflect circumstances of various subgroups. For example, there may be single females in traditional occupations who may be divorced and find a traditional occupation such as that of clerk or secretary easier to enter and balance with the role of single parent.

Past research indicated that females tend to delay occupational decisions until they know the type of person they will marry. Later, as they approach college graduation, they tend to choose more traditional

goal orientations presumably because of perceived expectations from their future mate. Nonsignificance of this variable may arise from the number of younger females who are employed in traditional occupations as a temporary position with expectations of marriage.

Marital status was not a significant factor in females' work or organizational commitment. Wolfe (1969) found single and divorced females expressing high values on work for independence, while married females had higher expectations for work to be interesting and socially stimulating. While the commitment may have different sources for married females as opposed to single ones, the degree of commitment is not discrepant.

Marriage plans have been found to have a moderating effect on career motivation and differences in timing of career development (Farmer & Fyans, 1983). It is also reported that females with high career motivation prior to marriage and the birth of children were observed to have a drop in measured motivation during the period when their children were young, but their motivation regained its former high level when these females viewed their children as no longer needing them full time in the home (Astin, 1976).

Occupational choice and work commitment are related as expected. Increased demands of nontraditional work would foster and also derive from a greater commitment to that work. Females with nontraditional occupations are more apt to have continuous work records (England, 1982). Females with high work commitment make more nontraditional occupational choices than females with low work commitment (Schiffler,

1975).

Briefly, the group of variables of residency, education, age, role stress, the risk-taking characteristics of dominance, bold-adventurous, and liberality, and job level were found to influence females' choice of career, work commitment, and organizational commitment.

CONCLUSIONS

Several conclusions emerge from these findings. The variables of residency, education, role stress, the risk-taking characteristics of dominance, bold-adventurous and liberality, and job level play an important part in determining, in varying degrees, the work role of females. This appears to be true from the first steps towards occupational choice and educational planning, through later work years, including those of reentry females.

Occupational Choice

The analysis of variance indicated the factors of residency and education influence females' traditional, neuter, or nontraditional occupational choices. Urban females with a higher educational level tend to choose nontraditional occupations more than rural females with a lower educational level.

The group of variables significantly related to the prediction of traditional, neuter, and nontraditional occupational groups are those of residency, education, role stress and the risk-taking characteristic of bold-adventurous. These variables predicted group membership with 65.61% accuracy. Those urban females with more education, role stress and a higher score on the scale measuring the risk-taking characteristic of bold-adventurous tend to choose nontraditional occupations.

Work Commitment

The analysis of variance indicated the factors of residency, education, and the risk-taking characteristics of dominance and liberality tend to influence the degree of females' work commitment as described by low, average, and high groups. Urban females with higher educational and job levels, and who score higher on scales measuring the risk-taking characteristics of dominance and liberality tend to report a higher degree of work commitment than rural females with less education, lower job levels, and lower scores on the scale which measures the risk-taking characteristics of dominance and liberality.

The group of variables significantly related to the prediction of low, average, and high work commitment groups are those of residency, occupational choice, education, job level, and the risk-taking characteristics of dominance and liberality. Urban females, who have higher educational and job levels, who hold nontraditional occupations, and who score higher on the scales measuring the risk-taking characteristics of dominance and liberality, report higher levels of work commitment. These variables predicted group membership with 51.55% accuracy.

Organizational Commitment

The analysis of variance indicated the risk-taking characteristics of dominance and bold-adventurous, and job level influence the degree of females' organizational commitment as described by low, average, and high groups. Females with higher scores on the scales measuring dominance and bold-adventurous, and those with higher job levels report

a higher degree of organizational commitment.

The group of variables which were significantly related to group prediction of low, average, and high organizational commitment groups were age, education, and the risk-taking characteristics of dominance and bold-adventurous. Older females, with higher levels of education and who score higher on the scales which measure the risk-taking characteristics of dominance and bold-adventurous report higher levels of organizational commitment. These variables predicted group membership in groups of low, average, and high organizational commitment with 45.75% accuracy.

It is evident that the situational and social expectations of behavior and personal characteristics impact upon occupational choice and decisions concerning centrality of work in a female's life, as well as organizational commitment.

IMPLICATIONS

Successful experiences of today's working females are making slow inroads on preconceptions concerning females workers. The actual potential and aspirations of females are not far removed from those of males, but rather have been influenced in a different direction by social expectations. Farmer and Fyans (1983) state that when job attributes and occupational differences are controlled, few sex differences in work attitudes are found.

Females are under-represented in many fields reputedly from lack of competent, interested females. In actuality, there are complex social factors contributing to this situation. An increase in information concerning females, their abilities, needs, attitudes, and personal skills may increase both understanding and acceptance of females as capable and productive workers.

RECOMMENDATIONS

The recommendations that have been derived from this research experience are of two types: those relating to future similar studies and those relating to the research topic.

Regarding research similar to the present study, multiple discriminant analysis appears to provide the most information of the two statistical procedures utilized.

Regarding the research topic, stress from multiple roles is a complex situation. Research needs to focus on differences between individuals with multiple roles and the experiencing of low or high stress.

1. Child care will continue to be a major concern that influences females' career development. Possible solutions could include expanding the use of flexible work scheduling and locating care facilities at work locations.
2. Information relating to career needs to be expanded to include affiliative tendency information and possible helping alternatives.
3. Information relating to common transitional periods and other experiences faced by the reentry females need to be related to females.
4. High-achieving female role models need to be presented to both females and males.

Greater flexibility in sex roles might enable all people, males as well as females, to explore alternatives and choices of lifestyles open to them.

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APPENDIX A: QUESTIONNAIRE

Part IV: IMPORTANCE OF ORGANIZATION: In this section we look at what it means to you to be a member of your organization. Some people feel themselves to be just an employee while others feel more personally involved in the organization they work for.

Indicate on a scale of 1-4 how much you agree with each one of these statements.

- 1-strongly disagree
- 2-disagree
- 3-agree
- 4-strongly agree

___ I am quite proud to be able to tell people who I work for.

___ I sometimes feel like leaving this employment for good.

___ I'm not willing to put myself out just to help the organization.

___ Even if the firm were not doing too well financially, I would be reluctant to change to another employer.

___ I feel myself to be a part of the organization.

___ In my work I like to feel I am making some effort, not just for myself but for the organization as well.

___ The offer of a little more money with another employer would not seriously make me think of changing my job.

___ I would not recommend a close friend to join our staff.

___ To know that my own work had made a contribution to the good of the organization would please me.

___ Please send me a copy of the summary of results of this study.

Any additional comments:

Part V: Here are some questions to see what interests you have and how you feel about things. On most items there are no 'right' or 'wrong' answers because people have the right to their own views. All you have to do is answer what is true for you.

1. Give only answers that are true for you. It is best to say what you really think.
2. Don't spend too much time thinking over each question. Give the first, natural answer as it comes to you.
3. Answer every question one way or the other. Don't skip any.
4. You should mark the a or c answer most of the time. Mark the middle b answer only when you feel you have to, because neither a nor c seems to be right for you.

I hold back from criticizing other people and their ideas.

- a. yes _____ b. sometimes _____ c. no _____

On social occasions I generally

- a. readily come forward _____
b. in between _____
c. prefer to stay quietly in the background _____

Money can buy almost everything.

- a. yes _____ b. uncertain _____ c. no _____

My decisions are governed more by my

- a. heart _____ b. both equally _____ c. head _____

An out-dated law should be changed

- a. only after considerable discussion _____
b. in between _____
c. promptly _____

I get slightly embarrassed if I suddenly become the focus of attention in a social situation

- a. yes _____ b. in between _____ c. no _____

I am always glad to join a large gathering, for example, a party, dance or public meeting

- a. yes _____ b. in between _____ c. no _____

What the world needs is

- a. more steady and 'solid' citizens _____
b. uncertain _____
c. more 'idealists' with plans for a better future _____

I am always keenly aware of attempts at propaganda in things I read.

- a. yes _____ b. uncertain _____ c. no _____

I have some characteristics in which I feel definitely superior to most people.

- a. yes _____ b. uncertain _____ c. no _____

greetings

The attached survey instrument concerned with women's choice and attitudes about work is part of a midwestern study being carried out at Iowa State University.

We are particularly anxious to obtain your response as your unique work experience inside or outside the home across the span of a lifetime will help describe work patterns of America's women. There have been immense but often silent contributions by women to our economy by their work in our factories, fields and homes. The importance and meaning of the work of women has often been overlooked, by others and even by themselves.

Please use the enclosed pencil to mark your responses; now, before you put this down. Then remove this letter, fasten the questionnaire and put it directly in the mail. Other phases of this research project cannot be carried out until we complete analysis of this survey data. All responses are coded so that the possibility of individual identification is eliminated.

We welcome any comments that you may have concerning any aspect of women's work which may not be covered in the instrument. We will be pleased to send you a summary of the survey results if you desire. If there are any questions you may reach me at the following number: 515-292-1322.

Thank you for your cooperation and contribution to the understanding of the role of work in the lives of women.

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This is a brief sample of the literature concerning this subject

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FEMALE WORK PATTERNS

Part I: BACKGROUND INFORMATION: I will use this information to group the returned questionnaires.

Date of birth _____ Occupation _____

Single _____ Married _____ year _____ Wid/Div/Sep _____ year _____

Education (# of years or highest degree) _____

If you have children, list their ages: _____

At the following ages, what type of work did/will you do

20 _____ 40 _____

25 _____ 50 _____

30 _____ 60 _____

35 _____ 65+ _____

How would you have liked this to have been different? _____

Do you believe that your responsibilities outside your job have affected or will affect the amount of time and energy that you have available for your work? Yes _____ No _____

For the next two sections, please let me know which work experience you are using for your responses: (check only one)
past _____ present _____ future _____ farm _____ house work _____

Part II: IMPORTANCE OF WORK: in this section we look at how important working seems to you.

Indicate on a scale of 1-4 how much you agree with each one of these statements:

- 1-strongly disagree
- 2-disagree
- 3-agree
- 4-strongly agree

_____ The major satisfaction in my life comes from my job.

_____ The most important things that happen to me involve my work.

_____ I'm really a perfectionist about my work.

_____ I live, eat and breathe my work.

_____ I am very much involved personally in my work.

_____ Most things in life are more important than work.

In social contacts I

- a. show my emotions as I wish _____
- b. in between _____
- c. keep them to myself _____

If a heated argument developed between other members taking part in a group discussion, I would

- a. like to see a 'winner' _____
- b. in between _____
- c. wish that it would be smoothed over _____

If the odds are really against something's being a success, I still believe in taking the risk.

- a. yes _____
- b. in between _____
- c. no _____

I like it when I know so well what the group has to do that I naturally become the one in command.

- a. yes _____
- b. in between _____
- c. no _____

I somewhat dislike having a group watch me at work.

- a. yes _____
- b. in between _____
- c. no _____

I think society should let reason lead it to new customs and throw aside old habits or mere traditions.

- a. yes _____
- b. in between _____
- c. no _____

I think it is more important in the modern world to solve

- a. the question of moral purpose _____
- b. uncertain _____
- c. the political difficulties _____

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I am known as the type of person who almost always puts forward some ideas on a problem.

- a. yes _____
- b. in between _____
- c. no _____

I think I am better at showing

- a. nerve in meeting challenges _____
- b. uncertain _____
- c. tolerance of other people's wishes _____

I am the energetic type who keeps busy.

- a. yes _____
- b. uncertain _____
- c. no _____

I make smart, sarcastic remarks to people if I think they deserve it.

- a. generally _____
- b. sometimes _____
- c. never _____

I am uncomfortable when I work on a project requiring quick action affecting others.

- a. true _____
- b. in between _____
- c. false _____

APPENDIX B: HYPOTHESES

1. Subhypotheses concerning females' occupational choice

Hypothesis 1a. There is no significant difference between females' choice of occupation as traditional, neuter, or nontraditional and residency.

Hypothesis 1b. There is no significant difference between females' choice of occupation as traditional, neuter, or nontraditional and age.

Hypothesis 1c. There is no significant difference between females' choice of occupation as traditional, neuter, or nontraditional and education.

Hypothesis 1d. There is no significant difference between females' choice of occupation as traditional, neuter, or nontraditional and role stress.

Hypothesis 1e. There is no significant difference between females' choice of occupation as traditional, neuter, or nontraditional and sex-role perception.

Hypothesis 1f. There is no significant difference between females' choice of occupation as traditional, neuter, or nontraditional and risk characteristics.

Hypothesis 1g. There is no significant difference between females' choice of occupation as traditional, neuter, or nontraditional and marital status.

2. Subhypotheses concerning females' work commitment

Hypothesis 2a. There is no significant difference between females' work commitment and residency.

Hypothesis 2b. There is no significant difference between females' work commitment and age.

Hypothesis 2c. There is no significant difference between females' work commitment and education.

Hypothesis 2d. There is no significant difference between females' work commitment and role stress.

Hypothesis 2e. There is no significant difference between females' work commitment and sex-role perception.

Hypothesis 2f. There is no significant difference between females' work commitment and risk characteristics.

Hypothesis 2g. There is no significant difference between females' work commitment and marital status.

Hypothesis 2g. There is no significant difference between females' work commitment and children.

Hypothesis 2h. There is no significant difference between females' work commitment and job level.

3. Subhypotheses concerning organizational commitment

Hypothesis 3a. There is no significant relationship between females' organizational commitment and residency.

Hypothesis 3b. There is no significant relationship between females' organizational commitment and age.

Hypothesis 3c. There is no significant relationship between females' organizational commitment and education.

Hypothesis 3d. There is no significant relationship between females' organizational commitment and role stress.

Hypothesis 3e. There is no significant relationship between females' organizational commitment and marital stress.

Hypothesis 3f. There is no significant relationship between females' organizational commitment and sex-role perception.

Hypothesis 3g. There is no significant relationship between females' organizational commitment and risk-taking characteristics.

Hypothesis 3h. There is no significant relationship between females' organizational commitment and children.

APPENDIX C: TABLES

Following are the possible values and their associated meaning for the nine variables found in the tables of this appendix. Note that some table do not contain listings for all the variables below.

Variable	Possible Values	Meaning
Age	<range>	Chronological age
Children	1	No children
	2	Elementary age children
	3	Adolescent children
	4	Preschool or more than three children
Education	1	High school
	2	Some additional training or education
	3	Undergraduate degree
	4	Graduate degree
Job level	1	High school
	2	Some additional training or education
	3	Undergraduate degree
	4	Graduate degree
Marital status	1	Married
	2	Single
Residency	1	Rural
	2	Urban
Risk characteristic (Dominance, Bold, or Liberality)	1	Significantly low
	2	Average range
	3	Significantly high
Role stress	1	Nonsignificant degree
	2	Significant degree
Sex-role perception	1	Feminine
	2	Androgenous
	3	Masculine

Table C1

Group means of variables of population choosing traditional neuter and non-traditional occupations

Variable	Traditional	Neuter	Non-traditional	Total
Age	41.980	37.065	35.292	39.987
Education	2.236	2.097	2.958	2.318
Marital status	1.402	1.548	1.500	1.446
Residency	1.235	1.677	1.666	1.388
Risk Dominance	1.971	2.129	2.125	2.025
Bold	2.010	2.032	2.333	2.064
Liberality	2.088	2.194	2.292	2.140
Role stress	1.500	1.290	1.417	1.449
Sex role	2.137	2.161	2.333	2.172

Table C2

Discriminant analysis: Work commitment group means

Variable	Low	Average	High	Total
Age	2.3076	2.3235	2.1200	2.2243
Education	1.6923	2.2352	2.4800	2.3076
Job level	1.4615	1.9264	1.8533	1.8525
Residency	1.3910	2.2243	1.4000	1.3910
Risk Dominance	1.6153	1.9705	2.1333	2.0192
Bold	1.1846	2.0000	2.1600	2.0641
Liberality	1.6153	2.1911	2.1733	2.1346
Role stress	1.6153	1.4558	1.4000	1.4423
Sex role	2.0000	2.1470	1.9705	2.2133

Table C3

Discriminant analysis: Work commitment standard deviation

Variable	Low	Average	High	Total
Age	1.1821	1.0139	0.9994	1.0196
Education	0.8448	1.1078	1.03140	1.0693
Job level	0.9674	1.0970	1.0866	1.0824
Residency	0.2773	0.5002	0.4932	0.4895
Risk Dominance	0.5063	0.6222	0.6437	0.6372
Bold	0.8006	0.6464	0.6160	0.6493
Liberality	0.7679	0.6290	0.6852	0.6823
Role stress	0.5063	0.5306	0.4932	0.5110
Sex role	1.4142	1.4687	1.4170	1.4315

Table A

Discriminant analysis: Occupational choice group means

Variable	Traditional	Neuter	Nontraditional	Total
Age	41.980	37.065	35.292	39.987
Children	2.276	2.291	2.258	2.275
Education	2.236	2.097	2.958	2.318
Job level	1.670	2.792	1.806	1.879
Residency	1.235	1.677	1.666	1.388
Risk Dominance	1.971	2.129	2.125	2.025
Bold	2.010	2.032	2.333	2.064
Liberality	2.088	2.194	2.292	2.140
Role stress	1.500	1.290	1.417	1.449
Marital status	1.402	1.548	1.500	1.446
Sex role	2.137	2.161	2.333	2.172

Table B

Discriminant analysis: Occupational choice group standard deviations

Variable	Traditional	Neuter	Nontraditional	Total
Age	17.18	12.00	8.90	15.43
Children	1.35	1.33	1.32	1.33
Education	1.02	1.04	1.16	1.07
Marital status	0.67	0.78	0.83	0.72
Job level	1.01	1.18	0.91	1.09
Residency	0.42	0.487	0.48	0.49
Risk Dominance	0.65	0.67	0.54	0.64
Bold	0.65	0.60	0.64	0.65
Liberality	0.70	0.65	0.62	0.68
Role stress	0.52	0.46	0.50	0.51
Sex role	1.40	1.70	1.20	1.42

Table C

Discriminant analysis: Work commitment group means

Variable	Traditional	Neuter	Nontraditional	Total
Age	2.31	2.32	2.12	2.22
Children	2.42	2.66	2.36	2.40
Education	1.69	2.24	2.48	2.31
Job level	1.46	1.93	1.85	1.85
Marital status	1.48	1.55	1.51	1.51
Residency	1.08	1.44	1.40	1.39
Risk Dominance	1.62	1.97	2.13	2.02
Bold	1.85	2.00	2.16	2.06
Liberality	1.62	2.19	2.17	2.13
Role stress	1.62	1.46	1.40	1.44
Sex role	2.00	2.14	2.21	2.17

Table D

Discriminant analysis: Work commitment group standard deviations

Variable	Traditional	Neuter	Nontraditional	Total
Age	1.18	1.01	0.99	1.02
Children	0.65	0.54	0.64	0.63
Education	0.84	1.11	1.03	1.07
Job level	0.96	1.08	1.09	1.08
Marital status	1.46	1.65	1.54	1.55
Residency	0.28	0.50	0.49	0.49
Risk Dominance	0.51	0.62	0.64	0.64
Bold	0.80	0.64	0.62	0.65
Liberality	0.77	0.63	0.69	0.68
Role stress	0.51	0.53	0.49	0.51
Sex role	1.41	1.47	1.42	1.43

Table E

Discriminant analysis: Organizational commitment group means

Variable	Traditional	Neuter	Nontraditional	Total
Age	2.22	2.12	2.34	2.17
Children	2.14	2.20	2.10	2.15
Education	1.78	2.25	2.75	2.33
Job level	1.56	1.79	2.28	1.89
Marital status	1.47	1.54	1.52	1.51
Residency	1.33	1.41	1.44	1.41
Risk Dominance	1.78	1.99	2.31	2.05
Bold	1.89	1.97	2.40	2.06
Liberality	2.11	2.09	2.37	2.15
Role stress	1.56	1.44	1.37	1.44
Sex role	1.78	2.25	2.00	2.17

Table F

Discriminant analysis: Organizational commitment group standard
deviations

Variable	Traditional	Neuter	Nontraditional	Total
Age	1.09	1.02	0.90	0.99
Children	0.54	0.50	0.48	0.51
Education	1.09	1.07	0.15	1.07
Job level	1.13	1.04	1.17	1.09
Marital status	0.56	0.75	0.69	0.63
Residency	0.50	0.49	0.50	0.49
Risk Dominance	0.33	0.60	0.59	0.63
Bold	0.78	0.63	0.56	0.65
Liberality	0.60	0.70	0.61	0.68
Role stress	0.52	0.51	0.49	0.51
Sex role	1.20	1.55	1.05	0.59