AN ABSTRACT OF THE THESIS OF

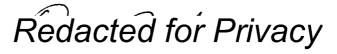Jacky May Hagan for the degree of Doctor of Education in
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Title: A Study of the Factors That Influence
Disadvantaged Female Community College Students'
Career Choices

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Warren N. Suzuki

Although the career choice decision for women is
recognized as a complex process, there is little
understanding about how the influencing factors affect
the choices of disadvantaged women returning to community
colleges. This study was concerned with understanding
how certain factors influenced the career choices of this
population.

A random sample of 15 subjects was identified for
this study from a population of 53 female students
attending Umpqua Community College in Roseburg, Oregon.
The data were gathered through examining the subjects'
college student records, interviews and survey
questionnaires.

The literature suggested that six major factors may

influence career choices of women. These are: the
environment, the family, individual abilities, self-
concept variables, vocational interests and values, and
the influence of education.   Factors identified in this
study which may influence the career choices of
disadvantaged women returning to community colleges and
provided support for the literature included: high
academic ability, a more tolerant and feminist attitude,
a sense of independence, interest in planning for a
career, and a supportive faculty. In addition, economic
security was the most often discussed motivating factor;
it had not been previously identified as an influencing
factor.

Contrary to the literature, the following factors
had minor influence on career choices: success in
mathematics courses, supportive parents and family, and
educational role models. In addition, the absence of a
familial value for education was identified. Although it
did not appear to impact the subjects' career choices, it
appeared to have previously created a barrier to
education.

A Study of the Factors That Influence
Disadvantaged Female Community College Students'
Career Choices

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Redacted for Privacy

Dean of the College of Education

Redacted for Privacy

Dean of Graduate School

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I. INTRODUCTION

Statement of the Problem

Disadvantaged women returning to college represent
one of today's fastest growing student populations
(Cohen, 1989; Glass & Rose, 1987; Swift, Colvin & Mills,
1987). These women are generally defined as 25 years of
age or older (MacKinnon-Slaney, Barber & Slaney, 1988;
Mohney & Anderson, 1988; Read, Elliott, Escobar & Slaney,
1988) who have economic or academic limitations and who
require special services or assistance in order to enable
them to succeed (U. S. Congress, 1990).

For many disadvantaged women, further education is
their only hope to increase their chances of self-
sufficiency (National Displaced Homemakers Network, 1990;
Swift, Colvin & Mills, 1987). The decision to return to
college is a difficult one and is often the result of
life changes related to such things as divorce or
separation (Glass & Rose, 1987; Mohney & Anderson, 1988).
Once in college, disadvantaged women feel isolated,

largely attributed to negative self-concepts, and need support to overcome barriers to completing their education (Glass & Rose, 1987).

The inability to make a realistic and practical career choice is frequently cited as a significant barrier to the success of disadvantaged women returning to college (National Displaced Homemakers Network, 1990; Swift, Colvin & Mills, 1987). For women who do make a career choice, they tend to underestimate their abilities and talents (Fitzgerald & Crites, 1980).

Although most studies about the career development of women have been conducted since 1975 (Brown, Brooks, & Associates, 1984), six major influencing factors have been identified which impact their career choice process: environmental variables, familial variables, individual abilities and achievement, self-concept variables, vocational interests and values and the influence of education and counseling. These factors may create barriers which must be overcome if career choices are to be made.

A primary difficulty for women returning to college is overcoming the impact of different environmental, societal and cultural attitudes and beliefs concerning women's roles and capabilities (Betz & Fitzgerald, 1987; Gutek & Larwood, 1987; Osipow, 1983). Female children and women face consistent occupational and sex-role

stereotyping which has the effect of limiting career options (Gottfredson, 1981; Shinar, 1975; Siegel, 1973).

In addition, disadvantaged women living in rural communities reflect values and traditions that are embedded deeply in rural life. Residents of rural communities tend to be more conservative and family-oriented, more community-oriented and less likely to move (Rosenfeld, et al., 1985).

These environmental conditions affect women differently than would urban settings, and can create more barriers for the career choice process. In rural communities, for example, job opportunities for women are limited since rural economics generally imply only one or two major industries (Rosenfeld, et al., 1985). Rural women are also more likely to marry sooner, stay married longer, have more children and remain homemakers during the child-rearing years as compared to urban women (Flora & Johnson, 1978). Even when they do work, rural women are less likely to know women with "careers." The role of homemaker appears stronger than the role of wage earner, providing women with fewer role models for nontraditional work (Falkowski & Falk, 1983; Rosenfeld, et al., 1985).

Therefore, the family environment for disadvantaged women creates barriers which may also influence their career development. Lower socioeconomic status, fewer

career-oriented female role models and less family encouragement have negative effects on the motivation and aspirations of disadvantaged women seeking an education (Betz & Fitzgerald, 1987).

Beliefs and myths concerning women's intellectual and physical inferiority also have served as powerful barriers to their career development (Maccoby & Jacklin, 1974). Academically, the absence of an adequate mathematics background constitutes a major barrier for women returning to college, since achievement in mathematics has been clearly demonstrated as an entry requirement for many careers (Armstrong, 1985; Sells, 1973).

Considering self-concept variables, home-oriented women and displaced homemakers have been found to have lower levels of self-esteem coupled with negative self-concepts when compared to career-oriented women (National Displaced Homemakers Network, 1990; Swift, Colvin & Mills, 1987; Tinsley & Faunce, 1980). More importantly, women returning to college typically have lower levels of academic self-esteem which serves as a serious barrier to their educational and career achievements (Tinsley & Faunce, 1980).

Another difficulty experienced by women returning to college is the adverse influence of traditional societal sex-roles for women. While nontraditional interests are

more characteristic of career-oriented than non-career-oriented women, the influence of sex-role socialization has contributed to the concentration of women in low-paying jobs (Betz & Fitzgerald, 1987; Gutek & Larwood, 1987). According to a report on women workers by the U.S. Department of Labor (1984), 55 percent of all employed women were in two occupational groups: clerical and service workers.

Finally, one of the most important influencing factors on women's career development is the educational system and, specifically, the counseling profession (Betz & Fitzgerald, 1987; Osipow, 1983). Academic success is one of the most important predictors of career achievement for both men and women. Unfortunately, education and counseling often present barriers in themselves for women by perpetuating traditional sex-role stereotypes and sex biases (Betz & Fitzgerald, 1987; Gutek & Larwood, 1987; Osipow, 1983). Most women still earn their degrees in lower-paying, lower-status, female-intensive fields (Chronicle of Higher Education Almanac, 1990; Hoyt, 1988). For those women returning to college, additional barriers are the lack of female professional role models and mentors (Almquist & Angrist, 1971; Hackett, Esposito & O'Halloran, 1989; Swift, Colvin & Mills, 1987), the absence of adequate career counseling (National Displaced Homemakers Network, 1990; Swift,

Colvin & Mills, 1987), and their feeling of little or no support from sources such as parents and other relatives (Freeman, 1975; Hooper & March, 1980).

Although disadvantaged women are returning to college in increasing numbers, they have been the subject of few published studies (Ekstrom, Marvel & Swenson, 1985; Glass & Rose, 1987; Swift, Colvin & Mills, 1987). Data collection has been mostly in response to evaluation requirements of federal vocational education displaced homemaker programs. Prior research of the career choice process of women in general has primarily documented the experiences of predominately high-ability, white, middle-class to upper-class young women (Fassinger, 1985, 1990; Gutek & Larwood, 1987; Osipow, 1983).

Since reentering homemakers seeking education and paid employment for the first time is exclusively a female phenomenon, many believe a separate theory of career development is needed for women (Betz & Fitzgerald, 1987; Gutek & Larwood, 1987). Despite the research on singular factors related to the career choice process for women, a unifying theory to describe the relationships among the variables has yet to be determined. This has made it difficult to weigh the relative importance of any given variable.

However, some progress has been made. Most recently, Fassinger (1985, 1990) elaborated on the

theoretical model proposed by Betz and Fitzgerald (1987) designed to test the importance and relationship of several factors in the career choice process for college women. The model, incorporating background factors (previous work experience and academic success), environmental variables (role model influence and perceived encouragement), and psychological variables (attitudes toward work, self and sex role attitudes), utilizes benchmark measures for each factor. For example, role model influence was measured by the extent and nature of the work involvement of the subject's female parent and any other significant women in her past. Even though the model was tested strictly on traditional-age junior- and senior-level university females who had established career majors, the results clearly demonstrated that many potentially related variables are important in the development of career choice theory for women.

Although these and other earlier efforts (Psathas, 1968; Zytowski, 1969) are important steps toward increasing our understanding of the complexity of women's career choice, further multivariate research is needed. Specifically, while it has been acknowledged that being poor adds to the problems of reentry (Betz & Fitzgerald, 1987; Brown, Brooks & Associates, 1984; Super, 1984), no previous career choice research has addressed this

population. Therefore, this study will address the question: How do the career choice factors influence the career choices of disadvantaged female community college students?

Significance of the Problem

The primary purpose of this study was to gather information which could be useful in improving career planning services for disadvantaged women returning to community colleges. Workforce trends strongly emphasize the importance of serious occupational pursuits for women. Women were predicted to represent two-thirds of new entrants into the labor force between 1986 and the year 2000 (Kutscher, 1987). By the year 2000, 80 percent of women age 25 to 54 are expected to be employed, with women representing 47 percent of the total work force (Kutscher, 1987).

It is clear that disadvantaged women will be required to work outside the home. Challenges exist for community colleges to help meet the career development needs of unemployed or underemployed women in ways that will enable them to escape poverty and become economically self-sufficient. Hoyt (1988) sees an important agenda for career development professionals:

> We cannot, in effect, afford to continue
> concentrating our career guidance efforts on those
> who least need help (the bright college-bound
> students) while essentially ignoring those whose
> career development needs are greatest. (p.34)

Women's career choices in the future must represent
a better matching of their individual characteristics to
the level and nature of their chosen fields. Those
choices should capitalize on, rather than waste, women's
abilities and talents if the nation is to counteract the
economic, social and personal problems created by the
underutilization of women in the workforce. The career
choice decision for disadvantaged women is crucial. An
inability to focus on one career choice can undermine
their reentry to college (Glass & Rose, 1987). If
education is to have a positive influence through
intervention upon the career choice process for
disadvantaged women, there must first be a clear
understanding about the factors which affect their career
choice process and the impact education has on those
choices.

<div align="center">Definition of Terms</div>

The following definitions will be applied throughout
this study:

Career - The developmental sequence of gainful
employment by an individual during the course of his or
her working life (Fitzgerald & Crites, 1980).

Career choice - The single occupation named as
one's best alternative at any given time (Fitzgerald &
Crites, 1980).

Career choice process - The process of how an

individual goes about choosing an occupation (Fitzgerald & Crites, 1980).

Career development - The process of developing and implementing self-concepts; a synthesizing and compromising process in which the self-concept is a product of the interaction of inherited aptitudes, physical make-up, opportunity to play various roles, and evaluation of the extent to which the results of role playing meet with the approval of others (Super, 1957).

Disadvantaged - Individuals (other than handicapped individuals) who have economic or academic limitations and who require special services and assistance in order to enable them to succeed (U. S. Congress, 1990).

Displaced homemaker - An adult who has worked primarily without remuneration to care for the home and family and, for that reason, has diminished marketable skills. Displaced homemakers have lost their main source of income because of divorce, separation, widowhood, disability, or long term unemployment of a spouse, or loss of eligibility for public assistance (U. S. Congress, 1990; National Displaced Homemakers Network, 1990).

Reentering or returning student - A student who is reentering an educational program after leaving it for an extended period of time; defined as 25 years of age and older (MacKinnon-Slaney, Barber & Slaney, 1988).

<u>Vocational maturity</u> - Description and assessment of the stage of career development reached by students of differing ages and grades, the types of career development tasks and how they have been confronted, and their readiness for career decisions (Crites, 1978).

Review of the Literature

As indicated earlier, disadvantaged women seeking an education to assist them with reentry into the workforce must overcome several difficulties if they are to successfully complete the career choice process. However, there is no clear understanding about how these variables influence the career choices of disadvantaged reentry women.

The purpose of this section is to review the accepted theory of career development and the major career choice variables for women. The six major career choice variables consistently identified in the literature include: (a) environmental variables; (b) familial factors; (c) individual abilities and achievements; (d) self-concept variables; (e) vocational interests and values; and (f) the influence of education and counseling. The identification of these variables serves as a basis for further investigation related to the career development difficulties and barriers of disadvantaged female community college students.

Theories of Career Development

Vocational psychology and career development began
with the work of Frank Parsons in his 1909 book, Choosing
a Vocation, which outlined the "matching men [sic] and
jobs" approach to career decision making. Parsons
specified that career choices followed the three steps
of: (1) self-knowledge, (2) knowledge of occupational
alternatives, and (3) a process of "true reasoning" to
find a good fit or "match" between person and job. This
approach serves as the foundation of the career
development field and a basis for vocational counseling.

Since 1909, other major theorists, such as Anne Roe
(1957), John Holland (1959), Donald Super (1957), and Eli
Ginzberg and his colleagues (1951), have contributed to
the understanding of career choice and career development
over the human life span (Osipow, 1983). Although these
theories have some relevance to the understanding of
women's career behavior, they were developed with men in
mind and with men as the subjects of study (Fitzgerald &
Crites, 1980; Gutek & Larwood, 1987). They excluded
consideration of complex variables which may be pertinent
to women (Betz & Fitzgerald, 1987; Osipow, 1975, 1983).
Women have more often been included under the generic
term "men," or studies have been generalized to include
women (Fitzgerald & Crites, 1979). Variables which
influence career choice in women are not as well

documented (Eisler & Iverson, 1986).

Interest in the vocational behavior of women is a recent phenomenon with extensive studies occurring since 1975 (Brown, Brooks, & Associates, 1984). Although a separate theory has not been recognized for women, Donald Super's (1957) developmental theory continues to be accepted as the most comprehensive to date (Bingham, 1983; Brown, Brooks, & Associates, 1984; Osipow, 1983). The central theme of Super's developmental theory is that individuals develop more clearly defined self-concepts as they grow older. They also develop clearer images of occupations with which they compare their self-image. The success of the final career decision is based on the degree of similarity between an individual's self-concept and the chosen vocational occupation.

Super (1957) contributed a loosely unified "set" of theories dealing with specific aspects of career development, held together by self-concept theory. Four aspects of Super's "set" of theories have served as a direct basis for investigating the career choice process of reentry disadvantaged women. The set includes the nature of career patterns, the application of career maturity theory, the exploration aspect included in his series of life stages, and the translation of self-concepts into career choices (Betz & Fitzgerald, 1987; Bingham, 1983; Gutek & Larwood, 1987).

Super (1957) was the first of the major theorists to utilize the concept of career patterns to describe career development for men and women. He described the following seven possible career patterns for women based on the central proposition that the model life role for women was that of homemaker:

1. The "stable homemaking pattern" characterized women as marrying while in or shortly after leaving school; they then had no significant work experience.

2. The "conventional career pattern" characterized women as working outside the home only until marriage.

3. The "stable working pattern" described women who worked continuously over their life span; work was their "career."

4. The "double-track career pattern" characterized women who combined home and work roles continuously.

5. The "interrupted career pattern" characterized a return to work later in life.

6. The "unstable career pattern" described an irregular and repeated cycle of home versus work involvement.

7. The "multiple-trial career pattern" consisted of an unstable job history.

Recent research illustrates the dramatic changes in women's career development and calls into question the accuracy and relevance of career patterns using the model

life role for women as that of homemaker. Betz (1984)

contributed significantly to the determination that

continuous, nontraditional employment is probably more

common today than is full-time homemaking. Using her

system of classification, which also included seven

categories or patterns, Betz (1984) conducted a large-

scale follow-up study of women who received their

bachelor's degrees from the University of Minnesota in

1968. The women were contacted ten years after

graduation. About 24 percent were highly committed to a

nontraditional occupation. Only 1.4 percent of the women

followed the "never worked" pattern.

The use of career patterns takes into account the

major difference in the career development of women

versus that of men--the expectation that women's lives

will usually include, if not revolve around, the roles of

homemaking and child rearing. However, the application

of homemaking as a career pattern is no longer valid

(Brown, Brooks, & Associates, 1984; Fitzgerald & Crites,

1980; Gutek & Larwood, 1987; Osipow, 1983). The term

"career" today implies gainful employment (Brown, Brooks,

& Associates, 1984; Betz & Fitzgerald, 1987; Fitzgerald &

Crites, 1980; Gutek & Larwood, 1987; Osipow, 1983). The

desire to engage in homemaking activities is an important

factor to be considered in the career choice process, but

it does not in itself constitute a career choice. Even

though the use of career patterns for women has lost its original relevance, it serves to emphasize that the study of women's career development is inherently more complex than that of men.

Super (1957) has also been instrumental in the application of career maturity theory based on the assumption that vocational behavior matures in a systematic fashion over time, and that it can be measured chronologically. Applying the term "career maturity" to adults has become an important question in recent years because of an increased awareness of career recycling and transitioning. Super (1984) has since suggested that a change in terminology would better describe the readiness for career decision making in adulthood. His position is that career maturity would better be referred to as "career adaptability." Career adaptability could be more useful for measuring the career maturity of disadvantaged reentry women since they experience change and maturity in unsystematic ways.

The measurement of adult career adaptability requires consideration of many related variables (Super, Thompson, Lindeman, Myers & Jordaan, 1985). For example, measures of career adaptability may not mean the same thing for different adults since the importance of work in people's lives varies and is related to their social class or sex. Unexpectedly, some studies have reported

that the attitudes of young females toward the career choice process mature more rapidly than those of their male counterparts (Lunneborg, 1978; Fitzgerald & Crites, 1980).

However, young females more often select traditional careers, such as being a secretary, which underutilize their interests and abilities (Knapp, R., Knapp, L., & Knapp-Lee, 1985; Swaney & Prediger, 1985). Fitzgerald and Crites (1980) have suggested that this anomaly may be reflective of the home and career, or sex-role conflict in women, which is exemplified by societal expectations regarding career choices.

In Super's (1957) life stages theory, exploration is central to the career choice process (Bingham, 1983). Between the ages of 14 and 25 intense activities are undertaken to elicit information about one's "self" and one's environment, to verify actions taken or to seek challenges (Super, 1957). As a result, young adolescents determine what constitutes adult behavior, learn various roles, test reality in relation to their interests and abilities, and obtain approval for socially acceptable behavior. However, the importance of exploratory behavior during adolescence does not eliminate the probability that exploration occurs in later life stages (Bingham, 1983).

Although adult women seeking education and reentry

into the work force may intensely examine various options, this is insufficient reason to assume they should be treated as adolescents experiencing the exploration stage for the first time (Bingham, 1983). Adult women have accomplished some major tasks of adolescence, such as socialization into adulthood and understanding adult roles, and have been exposed to many occupational choices. In addition, many adult women reflect on their past experiences to determine their likes and dislikes, skills and abilities.

The translation of self-concept into vocational terms is also different for adults and adolescents. Self-concepts, according to Super (1957), emerge in childhood primarily in the context of the family and mature and become articulated as a result of exploratory experiences during adolescence and early adulthood. It is during the exploratory stage that one's view of oneself becomes translated into vocational terms by the identification and awareness that attributes have vocational relevance.

During adolescence, however, sex differences often result in young males translating their self-perceptions into occupational terms and young females finding that translation only in relation to the roles of homemaker and mother (Bingham, 1983). As a result, women seeking reentry may believe they have no skills to offer an

employer and have an inadequate vocational self-concept.

Because Super's (1957) self-concept theory was not

generated from data about adult women, the impact of

inadequate vocational self-concepts of reentering women

on the career choice process is unknown (Bingham, 1983).

Since reentering homemakers seeking paid employment

for the first time is exclusively a female phenomenon,

this has strengthened the position of those who believe a

separate theory of career development is needed for women

(Betz & Fitzgerald, 1987; Gutek & Larwood, 1987).

However, Osipow (1983), among others, proposes that the

rapid social evolution on the status of women probably

makes theory formulation premature.

Environmental Variables

A variety of variables in the cultural and social

environments of females create barriers and influence the

nature of their career choices. Cultural attitudes and

beliefs concerning women's roles and capabilities,

through the mechanisms of gender role socialization and

occupational stereotyping, operate to encourage the

development of sex-typed psychological characteristics

and to perpetuate sex-typed adult roles.

Culturally-based gender-role socialization begins in

early childhood to prepare young girls for the roles of

wife and mother and to encourage in them the development

of certain personality characteristics and academic

competencies for the performance of these roles (Gutek & Larwood, 1987). Young girls are normally not socialized to prepare for careers or to learn the characteristics and competencies required for career pursuits.

Gottfredson (1981), in a model based on the concepts of circumscription and compromise, proposed that American society serves to limit individuals' perceived career options to a reduced range of appropriate gender-typed alternatives. Once the range is set, sometime between the ages of six and eight, career choices outside this range will not be considered except under unusual circumstances. Therefore, Gottfredson predicted serious restrictive effects of societal gender-role norms on the career aspirations of women.

Although Gottfredson's (1981) model is cited frequently, Siegel's (1973) earlier study had already shown that career options for girls were set at an early age. In her study, 70 percent of second grade girls selected either "nurse" or "teacher" as compared to 20 different occupations selected by boys in the same classroom.

The importance of this early socialization process, coupled with the "structure of opportunity," was proposed by Astin (1984) to determine work options. Astin's (1984) sociopsychological model emphasized the equal importance of both personal and social variables in the

career choice process. Astin projected that trends affecting the vocational behavior of women, such as changes in the nation's economy forcing women to seek paid employment, would provide a "structure of opportunity" to encourage broader career choices than learned in earlier socialization.

The classic study by Shiner (1975) shows that occupational stereotypes are consistent and durable in adult populations. Shiner asked college students to rate 129 occupations on a seven-point scale anchored by "masculine" (one) and "feminine" (seven). Results indicated that both male and female students consistently sterotyped occupations as masculine or feminine. Among the professions, attorney (1.6), engineer (1.9), dentist (2.1) and veterinarian (2.7) were clearly masculine, while nurse (6.6), elementary school teacher (5.6), and dietician (5.3) were feminine-typed.

Although attempts have been made to justify occupational stereotypes based on the position that some types of job content are more congruent with the skills of males while others are more congruent with those of females, there is strong evidence that the percentages of men and women within that occupation is the best indicator of the gender-type of occupation (Krefting & Berger, 1979; Krefting, Berger, & Wallace, 1978). Equally revealing is the research by Heilman (1979) which

indicated that high school girls expressed more interest in male-dominated occupations when led to believe that the gender ratios would in the future be more balanced, but high school boys expressed less interest in those occupations when confronted with the prospect of gender balance. The lack of other women in an occupation served to discourage young women from selecting that occupation, and some males preferred that the gender ratio in sex-typed occupations remain imbalanced. Thus, the lack of female role models in nontraditional occupations has served to further limit career options for women.

Familial Factors

Several aspects of the immediate environment have been studied to determine their influence on the career choice of women. These include the concept of socioeconomic status, family background characteristics, marital and familial status as an adult, and the availability of role models and supportive individuals in the immediate environment. Socioeconomic status is one of the more consistent predictors of the occupational level achieved by males (Fitzgerald & Betz, 1983). Sons of families in a higher socioeconomic status achieved higher occupational levels while sons of lower-class family backgrounds achieved lower occupational levels (Brown, 1970; Goodale & Hall, 1976). However, the influence of parental socioeconomic status on women's

career choice is inconsistent (Fitzgerald & Betz, 1983).
The positive relationship of higher socioeconomic status
to stronger career interest and motivation in women
(Astin, 1968), as well as the positive relationship of
women with professional fathers to those who pursue male-
dominated professions (Russo & O'Connell, 1980), have
both been studied.

Conversely, studies have also reported negative
relationships between career orientation and
socioeconomic status (Eyde, 1962) or no relationship
between the variables (Card, Steel & Abeles, 1980;
Crawford, 1978). The relationship between socioeconomic
status and higher educational and occupational
aspirations is weaker for females than for males. This
variable may not be as accurate a predictor of women's
career choice in part because of differing gender
expectations in society (Fitzgerald & Betz, 1983). While
higher socioeconomic families are likely to encourage and
support achievement related behaviors in their sons, the
extent to which they do so in their daughters is probably
more a function of parental attitudes and values
regarding women's roles in society.

For economically disadvantaged women returning to
community colleges, the impact of socioeconomic status of
the family on career choice is unknown. Studies are
consistent, however, in suggesting that more highly

educated fathers and mothers tend to have more highly educated and career-oriented daughters (Greenfield, Greinder, & Wood, 1980; Russo & O'Connell, 1980).

Earlier research by Almquist and Angrist (1971) on the impact of mother's occupational status on women's career development concluded that daughters of lower-status working mothers are more occupationally oriented than are daughters of homemakers. Other studies (Cherlin, 1980; Falkowski & Falk, 1983) have since validated the positive impact of working mothers on the probability that daughters will also be career motivated.

Career-oriented women tend to come from homes characterized by parental permissiveness and greater psychological distance, facilitating the development of automony and self-sufficiency in parent-child relationships (Tangri, 1972). Although this may appear reasonable, research concerning parental identification and closeness versus distance is too limited to be conclusive (Betz & Fitzgerald, 1987).

The state of family relationships and the effect of life events have been identified as critical factors in the decision of many women to return to college (Mohney & Anderson, 1988; Read, Elliott, Escobar & Slaney, 1988). For disadvantaged women returning to college who are often displaced homemakers, the effect of life events, such as divorce or death of a spouse, intensifies the

importance of choosing careers which can result in
economic self-sufficiency (National Displaced Homemakers
Network, 1990; Read, Elliott, Escobar & Slaney, 1988).

Although the impact of major life events on the
career choice factors of disadvantaged women is unknown,
evidence points to the dramatic shift in life objectives
for female community college students in general.
Whereas the American Council on Education's survey during
fall of 1977 indicated that women viewed their most
important life objective as raising their families, their
survey of freshmen women attending college in 1987
clearly showed their first life objective was to be well-
off financially (Astin, Green, Korn & Schalit, 1987).
Raising a family ranked fifth for female community
college students in 1987. This expressed interest in
economic security may partially be in response to the
reality faced by single parents, mainly women, who look
to community colleges as their one chance to improve
their prospects for a better life (Evanoski, 1988).
Therefore, the socioeconomic status of the women who
enter community college may be a more important career
choice indicator than that of the family of origin.

Family encouragement has been reported as a major
factor in helping high school girls plan careers in
male-dominated occupations. Farmer (1985) found that
parental support was one of the strongest predictors of

young women's career aspirations and motivations. While parental variables appear to be important in relation to women's career development, a major limitation of this research is the assumption that both parents are present in the family unit. Little is known about women raised in single-parent homes or with non-family members. The dramatic increase in the number of single-parent homes suggests that research based on nuclear-family assumptions will be increasingly irrelevant to understanding the career choice and development of many women and men.

The major difficulty in understanding women's career development is the certainty of marriage and motherhood for most women. The most consistent predictor of women's career orientation and innovation through the years has been their adult marital and familial status, or among girls and young women, their plans for marriage and children (Osipow, 1975; Matthews & Tiedeman, 1964). Women who remain single or marry and have fewer children seem to exhibit increased career-oriented behavior. Although the relationship of career-oriented women to labor force participation has weakened with the increase in working women in all marital and parental categories, the relationship of marital and parental status to career attainment, commitment, and innovation has remained strong (Betz &

Fitzgerald, 1987).

The chances are greater that disadvantaged women will choose to be homemakers and demonstrate less commitment to work outside the home (Falkowski & Falk, 1983). Longitudinal studies indicate that women who reside in rural areas, have fathers in manual labor occupations and mothers who were never employed outside the home, and who are in a nonacademic track with lower-rank scholastic performance are more likely to choose or migrate towards homemaking. Although studies have shown a decrease in the proportion of women choosing (as either aspiration or expectation) to be homemakers (Cherlin, 1980; Falkowski & Falk, 1983), it would appear that the career motivation of disadvantaged women continues to be more impacted by the homemaker role.

The critical issue of role conflict and role overload also underscores how the career choice process is different for women than men. While it is assumed that male roles are primarily directed toward an occupation, female adult roles are primarily family directed. This tends to delay or disrupt systematic career planning. For many women, career planning is still viewed as "contingency planning" that follows the "more important" decisions of marriage and parenthood (Angrist & Almquist, 1975). Therefore, the

establishment of a career role may be delayed until age 35 to 50 for women as opposed to an earlier expected age for men, since many men continue to view family responsibilities as "women's work" (Kassner, 1981).

Although males almost always report other males (such as their fathers or professors) as their significant others, females are more likely to report both male and female role models (Weishaar, Green, & Craighead, 1981). This has been partially attributed to the lack of female occupational role models for women to observe and emulate (Douvan, 1976; Goodale & Hall, 1976). However, the influence of the same gender parent is noted. Females, especially those making traditional career choices, were more likely to choose their mothers when listing one primary influencer (Weishaar, Green, & Craighead, 1981).

Women's Abilities

Beliefs concerning women's intellectual and physical inferiority have served as powerful barriers to their career development and as justification for discrimination against women. However, studies focused on general intellectual functioning have shown there are no gender differences in normal populations. In their significant book, The Psychology of Sex Differences, Maccoby and Jacklin (1974) found, in their reviews of research in this area, that intellectual

impairments adversely affecting school performance occur more frequently in boys than in girls.

Considering more specific abilities, Maccoby and Jacklin (1974) found that while the genders do not differ in general intelligence, females generally obtain higher scores on tests of verbal ability. Males generally obtain higher scores on measures of mathematical reasoning and spatial visualization abilities. However, consistent gender differences in these abilities do not appear until adolescence. By adolescence, children have had ample opportunity to learn sex role-appropriate characteristics and "appropriate" cultural expectations for females versus males. In addition, Maccoby and Jacklin found no practical significance in observed gender differences when group scores were examined. An observed gender difference is of almost no practical utility in predicting the capabilities of an individual based on gender and is an inadequate explanation for female's lesser achievements in certain areas (Hyde, 1981; Maccoby & Jacklin, 1974).

Other explanations for observed gender-related intellectual differences have focused on sociocultural factors, primarily related to sex-role socialization and stereotyped expectations of the performance capabilities of each sex. Sociocultural factors are

implicated by such findings as the failure of sex differences to occur prior to adolescence or to occur consistently across schools and countries (Maccoby & Jacklin, 1974). For example, while mathematics and science are viewed as male domains in this country, Asian and Oriental women are expected to be, and are, just as competent in mathematics and science as their male counterparts (Betz & Fitzgerald, 1987).

The absence of an adequate mathematics background constitutes a major barrier for women's career choices. The crucial importance of mathematics performance and achievement to many of the best careers in American society is now generally accepted (Armstrong, 1985). A frequently cited study by Sells (1973) illustrates the importance of mathematics to career options. Sells found that only eight percent of freshman women at the University of California at Berkeley, versus 57 percent of the freshmen men, had taken four years of high school mathematics. Four years of mathematics was a prerequisite for entering calculus or intermediate statistics courses required in three-fourths of the possible major fields, and remedial courses were not provided. Therefore, 92 percent of the freshmen women at Berkeley were prevented by lack of mathematics background from even considering 15 of the 20 major fields. The five remaining options were predictably

traditional--education, humanities, the social sciences, librarianship and social welfare.

It is clear that it is a lack of mathematics background, rather than a lack of innate ability, which explains females' poor performance in mathematics (Chipman & Thomas, 1985; Wise, 1985). Therefore, a critical issue seems to be the female's avoidance of mathematics. The breakdown of females' full participation in mathematics begins in adolescence, in about the ninth or tenth grades. Prior to this point, gender differences in math achievement are not generally found (Wise, 1985). During the secondary school years most girls stop taking mathematics, and their mathematics achievement test scores begin to fall below those of boys. However, girls who continue the study of mathematics achieve mathematics grades equal to that of boys (Chipman & Thomas, 1985).

Research has been consistent in identifying that mathematics confidence is a better predictor of further mathematics participation than is actual mathematics achievement (Chipman & Thomas, 1985). Overall, studies suggest that females have less mathematics confidence (Chipman & Thomas, 1985). As a result of this lack of academic confidence, the intellectual talents and capacities of women are not reflected in their educational or occupational accomplishments. Women's

career choices and goals are often far lower than those
of men with comparable abilities (Fitzgerald & Crites,
1980).

The Terman and Oden's (1959) longitudinal studies
are accepted as the most dramatic illustration of the
failure of gifted women to use their talents in
careers. Their sample, originally obtained in 1921-
1922, consisted of 1,528 children all measuring
intelligence quotients (IQs) of at least 135; 847 were
boys, and 671 were girls. Follow-up results of the
children at mid-life indicated, as projected, that the
majority of men had become highly successful in their
respective out-of-home professions; however, the
majority of women were homemakers or employed in
traditional female occupations. Of those working
women, 21 percent were teachers, 20 percent
secretaries, eight percent librarians or nurses and
eight percent social workers. Only five percent were
in the professions such as medicine or law, seven
percent were academicians, eight percent executives and
nine percent artists, musicians or writers.

The phenomenon illustrated in the Terman and Oden
study has been described as the "homogenization of the
American women" (Bem & Bem, 1976). In short, women are
socialized to pursue the same role regardless of their
individual talents or capabilities. A woman's

vocational choice is predictable not on the basis of her characteristics as an individual but on the basis of her gender. In terms of career development theory, gender has been a more powerful predictor of vocational choice in women than other factors.

Women's underutilization of their abilities and talents is obvious in the occupational realm. Even in female-dominated occupations, the top-ranking, most prestigious positions are held by men. For example, professional interior design and clothing design are dominated by men. Although women constitute half of university instructors, the number of female full professors, department chairs, and deans is insignificant. Thus, within a given occupation, men predominate at the upper levels and women predominate at the lower levels (Gottfredson, 1978).

It has been suggested that returning women utilize their academic talent in college. A recent longitudinal study to measure the persistence of returning female students in college showed that the returning students persisted in college at a rate far exceeding that of traditional age students (Pirnot, 1987).

Self-concept Variables

The importance of a positive self-concept for successful career development is central to Super's

(1957) theory. According to Super, career choice is a process of implementing one's vocational self-concept. A positive overall self-concept is strongly related to achievement motivation for both male and female students, but the relationship is stronger for females (Steriker & Johnson, 1977). Females with higher self-esteem generally display stronger career orientation and a greater chance of pursuing nontraditional careers.

Academic self-concept has been shown to influence the actual level of academic performance, such as in the area of mathematics (Maccoby & Jacklin, 1974). Lower levels of academic self-concept present serious barriers to the career development of women.

A closely related manifestation of women's lower academic self-concept is their tendency to underestimate their abilities and projected levels of performance in the future (Eccles, et al., 1983; Eccles, Adler, Meece, 1984). Women's significantly lower expectations for success may also occur primarily on masculine-stereotyped tasks, on tasks requiring competition or social comparison, and on tasks lacking clear performance feedback (Deaux, 1984).

Self-efficacy expectations present behavior which is closely related to self-concept behavior. Developed by Bandura (1977), self-efficacy is the ego's

expectation or belief that it can successfully perform a task or behavior. Bandura postulated that both behavior and behavioral change are affected by expectations of self-efficacy. The ego's expectation influences the kinds of behavior attempted and the persistence of the behavior when difficult situations are confronted. For example, the self-efficacy expectations of individuals regarding mathematics would influence whether they avoid situations requiring mathematics.

The concept of self-efficacy has been used to further the understanding of women's under-representation in traditionally male-dominated occupations. Hackett and Betz (1981) have asserted that female socialization provides less access to the sources of information important to develop strong self-efficacy career behaviors such as nontraditional role models and nontraditional career encouragement. As a result, women generally have lower and weaker self-efficacy expectations to pursue nontraditional majors and to study mathematics.

Since beliefs are related to achievement behavior, females' lower self-concepts likely serve as serious barriers to their educational and career achievements. Although women with greater self-esteem are in the best position to achieve career goals, it is also possible

that success in career pursuits can lead to the eventual development of positive self-concepts.

Attitudes toward women's roles in society have been found to be a strong predictor of women's career involvement. Research has consistently found that career-oriented women have a greater tendency to express more tolerant or feminist attitudes toward womens' roles than non-career oriented women (Stafford, 1984; Tinsley & Faunce, 1980). Nontraditional sex-role attitudes have been found among women in the skilled crafts, labor, and technical fields (Stringer and Duncan, 1985); whereas, home-oriented women have displayed less open-minded attitudes towards women's roles (Stafford, 1984). Expanded sex-role attitudes have also been related to greater labor force participation (Stafford, 1984), to higher levels of educational aspiration (Dreyer, Woods, & James, 1981; Stafford, 1984), and to stronger career motivation and career aspirations (Fassinger, 1985).

Recent research indicates that women are becoming more open-minded in their role expectations and values (Stafford, 1984). However, expanded role expectations present some highly problematic implications for relationships between men and women. The majority of women who plan to attain a college education may prefer egalitarian marriages, allowing them to pursue careers

and share family responsibilities; however, the
majority of men continue to prefer traditional
marriages (Fassinger, 1985). If the wife works after
marriage, she is expected to stop working after
childbirth and never lose sight of the priority of her
husband's, versus her own, career and the
responsibility for domestic duties (Gutek & Larwood,
1987). This discrepancy has implications for the
career development of women and societal attitudes
toward women's rights and roles.

Vocational Interests and Values

The concept of realism of career choice points to
a major difference in men's and women's career
development (Fitzgerald & Crites, 1980). Originally an
extension of Parson's (1909) theorem that career
choices should "match" the person's abilities to the
ability requirements of the job, realistic choices are
those where abilities and choices match. In comparison
to men, women have tended to underutilize their
abilities and make unrealistic career choices. A
majority of women continue to select occupations from a
restricted range of career choices (Hesse-Biber, 1985)
and choose jobs less congruent with their vocational
interests and abilities (Knapp, R., Knapp, L., & Knapp-
Lee, 1985; Swaney & Prediger, 1985).

Historically, the vocational interests of men and

women have been described separately (Campbell, 1977).

Although more recent criticisms of sex bias and

restrictiveness in interest inventories have largely

eliminated the use of separate forms, males and females

continue to respond differently to many interest

inventory items. Generally, women are more likely to

indicate interest in social and artistic activities,

and men are more likely to indicate interest in

scientific, technical, and mechanical activities. Raw

score patterns correspond with traditional beliefs

concerning female and male occupations and perpetuate

the over-representation of females in traditionally

female occupations.

The concept of differing work needs by gender

presents an important variable to be considered in the

career choice process (Dawis & Lofquist, 1984). Work

needs may be defined as the individual differences in

preferences for the rewards, payoffs, or outcomes of a

career and are generally considered intrinsic or

extrinsic. Intrinsic needs contribute to one's self-

esteem and self-actualization, the opportunity to use

one's abilities and intellectual stimulation.

Extrinsic needs represent rewards after the work is

done, including pay, security, fringe benefits, and

promotion. Career choices require compromise on some

types of work needs in order to obtain others.

Therefore, the ability to set priorities is important.

The career choice process for women seems to be facilitated by previous work experience. Results from a longitudinal survey of labor force participation provided evidence that the more consistent and extensive work involvement, the greater opportunity for advancement (Lassalle & Spokane, 1987). In addition, women participating in the labor force seemed to be more often fully vested as opposed to sporadically involved.

Harmon (1977) suggested applying Maslow's (1970) need theory to explain differences in the needs of homemakers versus working women. Maslow's higher-order needs (autonomy, esteem, and self-actualization) were seen as emerging gradually as the lower-order needs (physiological and safety) were met. Since homemakers have traditionally been taught to seek gratification of their needs from others, they are unlikely to move beyond the lower-order needs.

The insularity of low-income women makes their identity formation different than middle-class women and thereby impacts their vocational interests (Groves, Cassella & Jacobs, 1982). In low-income families, typically headed by single parents who work, poverty pervades every aspect of life. Low-income daughters and mothers are valued for their caretaking skills; the

survival of the family is contingent upon their
performance. As a result, Groves, Cassella and Jacobs
(1982) concluded that low-income women's vocational
role choices reflect an identity formation which
provides validation for caretaking skills. Poor
females relate to the value systems of their peers of
the same sex and their extended families, to the
exclusion of the values of the larger society.

Some evidence indicated that women now entering
college are motivated and influenced by the future
employment and economic benefits of their career
choices. Considering 16 factors which influenced the
selection of a major area of concentration by
undergraduate female students, three of the five
factors that significantly influenced choices were
economic related (Peterson & Roscoe, 1983).

Education and Counseling Influences

Two of the most important influences on the career
choice process for women are the educational system and
the counseling profession. Along with marital status,
education is considered to be the most important
variable in women's career development (Betz &
Fitzgerald, 1987; Harmon, 1970).

In only a few decades, colleges have been
transformed from predominantly male institutions to
ones where female students constitute majorities. As

stated earlier, reentry women age 25 and up are one of
the fastest growing populations on college campuses
today (Cohen, 1989; Glass & Rose, 1987; Swift, Colvin &
Mills, 1987). Within the community colleges,
enrollment increases are attributed largely to the
increased attendance by females who are more likely to
be from lower-income families than entering male
students (Cohen, 1989). However, the overall singular
statistical fact that about 55 percent of students on
college campuses in this country today are female
(Chronicle of Higher Education Almanac, 1990) ignores
the relative distribution of men and women among
different disciplines. For example, there is a
disproportionate number of men who choose careers in
science and engineering (Soloman, 1989). Most women
still earn their degrees in lower-paying, lower-status
fields, such as social services (Chronicle of Higher
Education Almanac, 1990).

A significant barrier for women in college has
been the absence of female professional role models and
mentors, most notably female faculty (Almquist &
Angrist, 1971; Betz & Fitzgerald, 1987; Hackett,
Esposito & O'Halloran, 1989). Findings from the
Almquist & Angrist (1971) study, conducted at a small
women's college, indicated that women seeking careers
were more influenced by faculty than family and peers.

In addition, the more disadvantaged a woman's background the more important the presence of strong female faculty role models seems to become (Conway, 1989). At Smith College, for instance, gifted welfare mothers and returning women who have been successful academically have consistently reported the transforming influence of faculty models (Conway, 1989).

Educational role model influences have also been shown to have a direct relationship in predicting both career salience and educational aspirations (Hackett, Esposito & O'Halloran, 1989). However, in these examples as well as others, the female populations being studied were enrolled in womens' colleges, which offer a different environment than the community college setting.

Subtle forms of discrimination have historically created another barrier for women and have had an impact on the career choice process. The Educational Amendments of 1976 (U.S. Congress, 1976) extended and revised earlier legislation requiring states to develop and carry out plans to overcome sex discrimination and sex stereotyping in vocational education programs. Although legislation such as this addresses discriminatory treatment, it does not address the prejudices underlying the treatment.

Studies have consistently shown that there are significant differences in the amount of support, encouragement, and discouragement received by males and females who choose to enroll in male-traditional courses as compared with those who enroll in female-traditional courses (Houser & Garvey, 1983; Haber, 1980). In a study of women enrolled in California vocational training programs, females choosing nontraditional programs received more support and encouragement than those who selected female-traditional fields (Houser & Garvey, 1983).

Subtle forms of discrimination have also been observed in students' perceptions about whether faculty members or counselors gave them the impression they would do either poorly or well. Females choosing nontraditional male-dominated courses have been shown to perceive more support from everyone, except their counselor (Houser & Garvey, 1983). Students who had considered a nontraditional program but decided against it were the ones who received the most discouragement from others. Students selecting traditional courses perceived the least support from others to enroll in a nontraditional course.

Other forms of subtle discrimination found in the educational system include Bernard's (1976) description of two subtle yet effective means of discriminating

against and discouraging women in higher education:
the "stag effect" and the "put down." The stag effect,
as defined by Bernard (1976), includes practices and
attitudes which protect the male "turf" from the
intrusion of women. In the case of nontraditional
career choices, when gender becomes the focus of
interactions within an educational setting, the person
of the "wrong" gender usually suffers; the persistent
feeling that one does not "fit" or is a "token" often
has a negative effect on one's self-image as a member
of that nontraditional profession.

The "put down" involves the actual harassment of,
versus simply ignoring, female students. As defined by
Bernard (1976), examples of put downs in educational
settings include demeaning comments about women, sexual
jokes, and the use of biased and discriminating
educational materials. Such subtle forms of
discrimination may have damaging effects on female
students' consideration of nontraditional career
choices.

One of the most important concepts in
understanding the career development barriers faced by
female students in higher education is Jo Freeman's
(1975) concept of the "null academic environment."
Freeman studied the responses of male and female
students at the University of Chicago concerning the

nature and extent of support they received for the

pursuit of their career goals. Freeman found that

although male students perceived more support from the

faculty (94 percent of which were males) than did

female students, a majority of students of both genders

perceived faculty as generally unsupportive. Freeman

termed this situation, in which neither gender felt

encouraged, as the "null environment." The barrier

created for female students, however, was that they

also felt little or no support from other people in

their environments, as opposed to male students who

reported significant support from parents, siblings,

relatives and friends. Therefore, Freeman's (1975)

"null environment hypothesis" states that:

> An academic environment that neither encourages
> nor discourages students of either sex is
> inherently discriminatory against women because
> it fails to take into account the differentiating
> external environments from which women and men
> students come. (p. 198)

It has been argued that faculty and counselors

should advocate a more direct approach with female

students to combat the differentiating social history

and the result of the null environment for females

(Betz, 1989). This position is based on the premise

that career "choices" assume the existence of more than

one option, and it is the responsibility of educators

and counselors to ensure that students have options of

significant value. A more direct approach may be more

important for returning women with limited career information who remain undecided and unable to specify any clear career choice or select an unrealistic occupational choice.

Career counseling is viewed as a process of assisting students with self-exploration, gathering career information and career decision-making which is realistic in terms of the individual student's interests and abilities. Reentry community college women may engage in more career information seeking behavior when career counselors intervene (Weihe, 1980). Studies have suggested, however, that career counseling has served to perpetuate limited career choices and reinforced traditional female vocational behavior through counselor bias (Houser & Garvey, 1983; Sauter, Seidl, & Karbon, 1980). As defined by Schlossberg and Pietrosfessa (1973), counselor bias refers to "an opinion, either unfavorable or favorable, which is formed without adequate reasons and is based upon what the bias holder assumes to be appropriate for the group in question" (p. 44). Bias is evident whenever it is assumed that someone can or cannot take a certain course of action because of her or his age, social class, sex or race.

Previous studies about counselor bias have, more specifically, addressed the concept of gender bias

which is a set of attitudes favoring one gender over the other (Betz & Fitzgerald, 1987). For example, Sauter, Seidl, and Karbon's (1980) study found that guidance counseling tended to have a significantly different effect between those females choosing traditional versus nontraditional careers. The traditional group significantly reported being influenced more than the nontraditional group; in fact, not a single nontraditional female reported being influenced by counselors. Likewise, Houser & Garvey (1983) found that women enrolling in nontraditional vocational training programs reported receiving more support and encouragement than traditional women from every significant group, except their counselors.

As stated earlier, previous research has served only to provide speculation concerning counselor bias in vocational counseling. Studies related to retrospective reporting by female students about their counseling experiences has been identified as an area for further research (Betz & Fitzgerald, 1987).

Summary

Although career choice theory was primarily developed with men in mind (Betz & Fitzgerald, 1987; Fitzgerald & Crites, 1980; Gutek & Larwood, 1987; Osipow, 1983), Supers'(1957) developmental theory focusing on the translation of self-concepts into

career choices continues as the most comprehensive theory to date (Bingham, 1983; Brown, 1984; Osipow, 1983).

The career choice process involves many steps and variables. This is especially true for women returning to college. Although there is no accepted theory of career choice for women, six major factors seem to influence their career choices: environmental variables, familial variables, individual abilities, self-concept variables, vocational interests and values, and the influence of education and counseling. Studies have examined these career choice factors separately; however, these factors may occur concurrently and interact with one another.

Although studies related to singular career choice factors have achieved some consistency in their findings, the applicability of this research to the career choice process of disadvantaged reentry female college students has yet to be demonstrated. Prior research has documented the experiences of predominately high-ability, white, middle-to-upper-class young college women (Betz & Fitzgerald, 1987; Fassinger, 1985, 1990; Gutek & Larwood, 1987).

Therefore, this study will address the question: How do certain career choice factors influence the career choices of disadvantaged female community

college students? Understanding this requires the answer to several additional questions. These include:

1) To what extent do environmental concerns influence career choice?

2) To what extent do parental backgrounds influence career choice?

3) To what extent do academic abilities influence career choice?

4) To what extent do attitudes towards women influence career choice?

5) To what extent do previous work experiences influence career choice?

6) To what extent do education and counseling influence career choice?

II. METHODOLOGY

Population and Sample

The population for this study consisted of 53 female students attending Umpqua Community College in Roseburg, Oregon. Umpqua Community College is a small, comprehensive college located in rural, southwestern Oregon. The annual enrollment projections for the 1991-92 academic year included serving 2,800 full-time-equivalent students. A majority of the students attend part-time and average 28 years of age. Over one-half the students are women. Students who participated in the study met all of the following criteria:

1. Enrolled full-time (twelve credits or more) during fall quarter 1991;

2. Completed one academic year or 45 quarter credits or more at the time of their participation in the study;

3. Received federal Title IV student financial aid (U.S. Congress, 1972);

4. Enrolled in an approved academic degree program;

5. Twenty-five years of age or older.

Students meeting these criteria were identified using Umpqua's data management system. Their names were listed alphabetically and then ordered using a random-order number table.

Starting with the first student in the random-order

list, students were contacted by telephone until 15 had agreed to participate in the study. When an individual was contacted by telephone, the caller was identified, the purpose of the call and purpose of the study were briefly described, and the source of the initial identification was revealed following the telephone script as described in Appendix A. Letters confirming interview appointments were then mailed to all participants (Appendix B).

Sixteen students were called in order to identify 15 subjects willing to participate in the study. The student who declined stated that she could not volunteer to participate as she was enrolled in 20 credits, working, and "had to graduate in June."

All subjects were Caucasians. The mean age of the subjects was 35 years. The youngest participant was 26 years old, and the oldest 45 years of age. Three subjects had never married, and 12 were married at least once. Their average age at the time of their first marriage was 21 years. Nine subjects were married one time, and eight were presently single parents with children, ranging in age from two to 21 years. They had an average of 1.5 children. All subjects who had been married had at least one child; the most children in a family was three.

Declared academic majors for the subjects are listed

in Table 1. The 15 subjects' majors were evenly split between two-year technical degree programs and professional university transfer degree programs. Four subjects declared nursing as their academic major. Although this represented 25 percent of all subjects in the study, it was comparable with the college's enrollments. Thirty percent of all technical students, female and male, declared nursing as their major for the fall 1990 and winter 1991 quarters. In addition, many technical nursing graduates also obtain the "block" transfer degree, indicating plans to obtain a bachelor's degree in nursing.

Nine subjects graduated with high school diplomas from schools within the college district. Four subjects graduated with high school diplomas from out-of-state schools, and two students earned General Education Development (GED) high school equivalency diplomas.

Only one subject had attended another college prior to Umpqua Community College. One-half of the subjects first enrolled at Umpqua Community College over five years ago. Of these subjects, the majority enrolled in seven credits or less. Four subjects completed secretarial courses during that time and became employed in secretarial related work.

All subjects had completed a minimum of 50 credits prior to fall term 1991. Three subjects who had

Table 1

Summary of subjects' declared academic majors.

Declared Academic Major	N	%
Technical majors		
Accounting Technology	1	7%
Digital Electronics Technology	1	7
Nursing	4	27
Medical Secretary	<u>1</u>	<u>7</u>
Subtotal	7	47%
Professional majors		
Business Administration	1	7%
Education	2	13
Engineering	1	7
Physical/Occupational Therapy	2	13
Psychology	<u>2</u>	<u>13</u>
Subtotal	8	53%

completed over 100 accumulated credits were enrolled in
the second-year nursing program. Students in the nursing
program generally accumulate more credits than other
students due to program pre-requisite requirements. The
subjects were enrolled in an average of 14 credits and a
range of 12 to 19 credits for fall quarter 1991.

The subjects' accumulated grade point average's
(GPA) ranged from 2.88 to 4.0. The median GPA was 3.5;
as a comparison the average accumulative GPA for all
college graduates during spring 1990 was 3.0.

<div align="center">Procedure</div>

Data were gathered through examination of the
subjects' college student records, interviews and the
subjects' completion of written questionnaires.
Qualitative methodology allowed the explanation of
complex processes for which relevant variables and theory
have yet to be identified (Marshall & Rossman, 1989;
Patton, 1990).

This section outlines the variables which were used
to identify factors that may influence the career choices
of female disadvantaged returning community college
students. Career choice factors are discussed according
to their order in the review of the literature:
environmental variables, familial factors, abilities and
achievement, self-concept variables, vocational interests
and values, and the influence of education and

counseling. In addition to these variables, the subjects' readiness to make career choices was examined.

1. Subjects' descriptions of how they made career decisions. The subjects were first asked during the interview to state their career choices. Subjects were asked if their career choices were fairly definite, tentative, or if they were undecided. The extent to which occupational choices were nontraditional was determined by the percentage of women enrolled in Umpqua Community College's majors (Hackett, Esposito & O'Halloran, 1989). The subjects' career choices were assessed as nontraditional if 33 percent or less of the enrollees were women, moderately traditional if 34-65 percent were women, and traditional if 66 percent or more were women.

2. Readiness to make career choices. Super's Career Development Inventory (1981) was completed by the subjects to provide another perspective concerning their readiness to make sound career choices. The Career Development Inventory has the attributes of a sound instrument for assessing the overall career maturity and readiness of college students to make career decisions (Westbrook, 1983). As reported in the Career Development Inventory manual, reliability in terms of internal consistency (Cronbach alpha coefficients) for the combined scales ranges from .79 to .88 with a median of

.86. Scores on previous forms of the <u>Career Development Inventory</u>, as well as the current one, have been highly stable over periods of up to six months.

The <u>Career Development Inventory</u> is based on the theoretical model that was developed and tested with the Career Pattern Study (Super and Overstreet, 1960). It was then tested independently to assure that the basic test dimensions show varying degrees of intercorrelation, sufficient to justify using the general construct of career maturity.

The <u>Career Development Inventory's</u> current manual (Super, Thompson, Lindeman, Jordaan & Myers, 1981) indicates that vocational maturity has been narrowed to three major factors: student planning orientation, use of resources for career exploration, and student's ability to integrate career information and decision making. The <u>Career Development Inventory</u> yields eight scores: career planning, career exploration, decision making, world-of-work information, knowledge of preferred occupational group, career development attitudes, career development knowledge and skills, and the career orientation total.

3. <u>Environmental variables</u>. Three interview questions were posed to obtain information about how cultural and environmental influences may have impacted the subjects' career choices. These included:

a. Did a recent significant event prompt your return to college (Astin, 1984; Evanoski, 1988; Read, Escobar & Slaney, 1988)? Follow-up questions were asked about the impact of such events on their career choices.

b. Will you consider relocation from this area when you have completed your education? Subjects who were "place bound" were asked to describe how local job opportunities had affected their career choices (Rosenfeld, et al., 1985).

c. Have you experienced or observed occupational sterotyping or discrimination which might have discouraged you from pursuing certain careers (Gottfredson, 1981; Heilman, 1979; Shiner, 1975)?

4. Familial factors. Questions were orally posed to determine how various familial factors may have influenced the subjects' career choices. The following questions were asked:

a. What kind of encouragement did you get from your family to pursue a college education (Farmer, 1985; Greenfield, Greinder, & Wood, 1980; Russo & O'Connell, 1980)?

b. Would you tell me about your parents? Follow-up questions below (c-e) were asked if prompting was needed.

c. Were you raised in a two-parent home for the majority of your youth?

d. What have been (or were) your parents'
occupations during most of their lives (Fassinger, 1985;
Fitzgerald & Betz, 1983)?

e. What were (or are) your parents' highest levels
of education (Greenfield, Greinder, & Wood, 1980; Russo &
O'Connell, 1980)?

f. What was (or is) the highest level of education
for your husband (or former husband) or your significant
other?

g. If you have been or are now married, what was
(or is) the occupation of your spouse?

h. Who in your personal life has had the greatest
influence on your career choice (Weishaar, Green &
Craighead, 1981)?

i. What do you view as your most important life
goal (American Council on Education, 1977)?

In addition, subjects were asked about their marital
history and the number of children in their families.

5. Abilities and achievements. Three indicators
from the subjects' student college records were used to
estimate academic abilities and achievements. The first
indicators were the subjects' recommended initial
mathematics and English course placements and actual
course performance based on their American College
Testing (ACT) ASSET college entrance test scores
(Fassinger, 1985, 1990). Measures of academic

performance were obtained for writing, reading, and mathematics. The ASSET program is an American College Testing-developed and locally-scored course placement and advising program designed specifically to serve students entering two-year institutions. Introduced nationally in 1983, the service is now being used in about one-third of the nation's two-year colleges, including Umpqua Community College.

The writing skills test is a 36-item, 25-minute test that measures the student's understanding of English mechanics, sentence structure and rhetorical skills. The reading test is a 24-item, 25-minute test which measures reading comprehension as a product of skill in referring and reasoning. The mathematics skills test is a 32-item, 25-minute test designed to assess basic numerical skills in the use of numbers, decimals, fractions and word problems involving arithmetic. Four advanced mathematics tests supplement the numerical skills test. The subjects' actual academic peformance in their first mathematics and English courses was then evaluated.

Although high school GPA is often used as a self-reported academic success measure (Fassinger, 1985, 1990; Falkowski & Falk, 1983), the current college GPA (obtained from college student records) was used as the second ability estimate. Community college students are not required to submit high school transcripts; in

addition, returning students may not have completed a high school education or be able to accurately recall their GPA.

The third indicator used to assess abilities and achievements was the subjects' completion of college mathematics coursework (Armstrong, 1985; Chipman & Thomas, 1985; Sells, 1973; Wise, 1985). In addition, subjects were asked two mathematics related questions during the interview:

a.   Have college mathematics requirements impacted your career choice?

b.   How do you think women feel about mathematics? If needed, subjects were asked, "Do you think female students avoid mathematic courses," and, "If so, why?"

6.   Self-concept variables. A shortened, 15-item version of Spence and Helmreich's (1978) Attitude Toward Women's Rights and Roles Scale (AWS) was included as a second questionnaire (Appendix C). The Attitude Toward Women's Scale measures attitudinal responses representing the following roles: vocational, educational, and intellectual; freedom and independence; dating, courtship and etiquette; sexual behavior; and marital relationships and obligations. This adaptation of the original 55-item instrument contains statements describing the rights, roles, and privileges that women ought to have or be permitted and requires respondents to indicate their

agreement with each statement on a four-point scale ranging from "agree strongly" to "disagree strongly." Items are scored 0 to 3 with higher scores indicating a more nontraditional, egalitarian attitude; lower scores indicate a more traditional attitude. Possible total scores thus range from 0 to 45.

Norms for the <u>Attitudes Toward Women Scale</u> (Appendix C) were established by Spence and Helmreich (1972) based on samples of 710 male and 754 female students and their parents (298 mothers and 232 fathers). In these samples and others, Cronbach alpha coefficients by gender are similar and are in the low .90's for the 55-item version and in the high .80's for the 15-item version. The 15-item version has been found to have a correlation of .91 with the original 55-item instrument (Spence & Helmreich, 1978). Since the results of factor analysis suggest that the <u>Attitudes Toward Women Scale</u> is essentially unifactorial, the short version is extremely useful when it is important to conserve testing time.

Normative studies have indicated that women's attitudes toward women's roles are more liberal than men and that students tend to be more non-traditional than their parents regarding the roles of women in society (Betz & Fitzgerald, 1987; Stafford, 1984). However, the usefulness of normative data is limited since gender-role attitudes have changed over time.

Validity of the <u>Attitudes Toward Women Scale</u> is derived primarily from its extensive usage in research. Betz and Fitzgerald (1987) have noted that the <u>Attitudes Toward Women Scale</u> has been the most commonly used attitude measure in this research area.

7. <u>Vocational interests and values</u>. Subjects were asked to respond to the following questions:

a. What do you see as the rewards of working (Astin, 1984; Stafford, 1984)?

b. What do you view as your most important life objective (Astin, 1984; Stafford, 1984)?

c. Have you been employed part-time or full-time outside the home (Fassinger, 1985; Lassalle & Spokane, 1987)? If they had worked outside of their homes, they were asked about their work histories, beginning with the most recent position.

Prior studies have not examined the possible impact that having enough money to attend college has had on career choices. Subjects were asked if money impacted their career choice and if they felt restricted in their career options because of inadequate resources.

8. <u>Influence of education and counseling</u>. The possible influence of education and counseling on the subjects' career choice was determined by questions posed during the interviews. These included:

a. How do you perceive the attitude of faculty and

counselors regarding helping you with your career decision?

b. Who in education had the greatest influence on your career choice?

c. What college services were helpful in assisting you with your career plans?

An open-ended interview format (Appendix D) allowed probing of issues and responses, in greater depth, which were unclear (Patton, 1990). The interviewer completed an orientation with each subject prior to the actual interview and reviewed the interview process to assure that recording techniques did not interfere with the interview (Marshall & Rossman, 1989). Participants were advised that the information they provided would be treated as strictly confidential. All subjects allowed their interview to be audiorecorded for transcription and analysis. However, two interviews were transcribed directly by hand when the audio equipment malfunctioned. The interview script is included in Appendix D.

The interviews were scheduled and conducted in a small conference room located in the college library building. Interviews ranged in length from 50 minutes to two hours; the majority lasted about one hour.

A survey cover letter, survey instruments and follow-up procedures were constructed using the methods provided by Dillman (1978). The cover letter and survey

questionnaires were given to the participants at the conclusion of their interviews.

The first follow-up letter (Appendix E) was mailed one week after the interview to thank those who had returned the survey and to provide a reminder for those who had not. Three weeks after the interview, a second telephone follow-up was made to those who had not responded. All subjects promptly returned the questionnaires upon receiving the telephone follow-up.

Marshall and Rossman's (1989) analytic procedures to achieve data reduction and accurate interpretation of the data were applied. These procedures fell into the following five modes:

(1) Organizing the data.

(2) Generating categories, themes, and patterns.

(3) Testing emergent hypotheses.

(4) Searching for alternative explanations.

(5) Writing the report.

III. FINDINGS AND DISCUSSION

Introduction

This study was concerned with understanding how career choice factors influenced the career choices of disadvantaged female community college students. The related literature focused on six major factors which have been shown to influence career choices: environmental variables, familial factors, individual abilities, self-concept variables, vocational interests and values, and the influence of education and counseling. Questions focused on how each of these individual factors influenced career choices. In addition, the subjects' readiness to make career choices was examined.

Academic Abilities and Achievement

Table 2 summarizes the success of subjects in their first college math courses. Course placements were based on the subjects' American College Testing (ACT) ASSET college entrance test scores. With two exceptions, subjects completed the courses which were recommended based on ASSET test scores. An overall accumulative 3.7 average GPA was achieved by the subjects in their first college math courses.

Prior studies by Fassinger (1985, 1990) indicate that traditional age female students' mathematics ASSET test scores were generally higher than the average university student. However, she did not study actual

Table 2

Grades earned in first mathematics course completed (N=15).

Math Course (1)	Grades Received		
	A	B	C
Pre-Algebra	3	0	0
Beginning Algebra (2)	8	1 (3)	1
Intermediate Algebra	0	1 (3)	0
College Algebra (4)	1	0	0

(1)   Listed in order of difficulty
(2)   Minimum requirement for the associate in applied science degree
(3)   Subject enrolled in more difficult course than recommended
(4)   Minimum requirement for the associate in arts transfer degree

classroom achievement to determine if the ASSET recommended placement was an accurate indication of ability. In this study, the ASSET recommended initial placement seemed to be a conservative indication of ability. Twelve subjects earned "A" grades in their first mathematics course. Two students that earned "B" grades completed courses more advanced than the test recommended. Ten subjects first enrolled in beginning algebra, the minimum requirement for the associate in applied science degree. One subject completed college algebra, the minimum requirement for the associate in arts transfer degree. Only three subjects completed pre-algebra (considered pre-college) courses.

Table 3 is a summary of the subjects' achievements for all mathematics courses completed at Umpqua Community College. As shown, the 15 subjects completed 37 courses, earning an average combined grade point average (GPA) of 3.42. It should be noted, however, that their average overall GPA was 3.5, which is higher than all graduating students during spring 1990. This finding supports the Chipman and Thomas' (1985) research findings, that disadvantaged women can be successful in college mathematics when they enroll in mathematics courses.

It is not surprising, given their success in mathematics courses, that the subjects in this study generally stated that college mathematics requirements

Table 3

Grades earned in all mathematics courses completed.

Math Course [1]	Grades Received				
	A	B	C	D	W/I
Pre-Algebra	3	1	0	0	0
Beginning Algebra	10	1	1	1	0
Intermediate Algebra	4	5	0	0	1 [2]
Trigonometry	1	0	0	0	0
College Algebra	4	1	1	0	1 [3]
Elementary Functions	2	0	0	0	0
Calculus I	1	0	0	0	0
Calculus II	1	0	0	0	0
Courses completed	26	8	2	1	2

Hours attempted   152
Hours earned   144
Points earned   492
Accumulative GPA (all courses)   3.42

(1)   Listed in order of difficulty
(2)   Withdrawal
(3)   Incomplete

did not impact their career choice. Only two subjects
indirectly admitted that their difficulty with
mathematics impacted their career choices. A transfer
business major commented that she enjoyed computers, but
the math "scared" her to death. She would have liked to
still consider a computer programming major, but felt
that she was "too hard on herself" and that she "liked
the A's."

Although not influential in their career choices,
subjects did acknowledge their difficulties and fears
about mathematics. One subject who completed three
mathematics courses simply stated, "I thought it was
tough (laughing). Math has never been my subject, and I
struggled, and I worked, and I sweated bullets, and I got
my B's." A nursing major who earned an A for each of the
three courses she completed commented, "I'm a real
concrete person, I have to feel it, touch it, and
manipulate it to understand it--so math has been beyond
me. I always want to know why the formula works, and I
ask a lot of questions."

Success in mathematics came as a surprise to one
subject who has since earned A grades in six courses:
"When I was in high school I didn't excel, and I was not
looking forward to it, and when I took intermediate
algebra and found out I could do it, it came as a shock."

Although it did not represent their own difficulty,

the subjects seemed to understand the reasons that women

struggle with mathematics. As illustrated below, they

cited an absence of encouragement, support, and

expectations for girls and women to succeed. This is

similar to findings in other studies (Chipman & Thomas,

1985; Wise, 1985).

> When you have to take college algebra, all of a
> sudden you are not doing one plus one, it's A equals
> B, and this makes women really afraid. It's the
> letters that scare people. Typically, men and women
> are raised differently; women are raised in a way
> that math is a man's job. It's just the way we are
> raised.

> I just don't think teachers look for girls who
> have math difficulties--they caught my son and he
> is fine after tutoring. But, they didn't catch it
> with my daughter, and it was only after I complained
> that she got extra help. I think girl's math
> performance has to do with expectations. Girls
> aren't expected to do math.

> I don't think girls as a whole are encouraged
> earlier to take math. I also think that throughout
> the scope of the world men prefer women to be a
> little dumber. I think it's real intimidating for
> men to have a really intelligent woman around. It's
> scary for men to think women would be better.

These views were typical of the attitudes of many in the

study who related examples of girls and women being

treated differently than boys and men in mathematics

classes.

However, subjects in this study earned slightly

higher grades in their first mathematics courses than

their first English courses. Table 4 summarizes the

subjects' successes in their first college English

courses. As shown, a large majority of the subjects

Table 4

Grades earned in first college English course (N=15).

English course (1)	Grades received		
	A	B	C
Remedial Reading 40	1	0	0
Remedial Reading 45	1	0	0
College Writing 121 (2)	5	5	2
College Writing 122 (3)	1	0	0

(1)   Listed in order of difficulty
(2)   Minimum requirement for the associate in applied
      science degree; College writing 123 is the minimum
      requirement for the associate in arts transfer
      degree
(3)   Subject enrolled in more difficult course than
      recommended

tested into and enrolled in the college-level Writing 121, which is the minimum requirement for the associate in applied science degree. Writing 121 is the first required transfer degree English course. An overall 3.4 GPA was achieved by the subjects in writing. Only two students first enrolled in remedial English courses.

Subjects in this study were above average in academic achievement, as measured by their average accumulative 3.5 grade point average. No academic limitations were identified. In addition, they exhibited a great amount of persistence and determination. Although women are underrepresented in many math-related fields, it is not evident from this study that mathematics is an influencing factor in career choices for those represented in this study. Other factors, such as the relationship to their vocational interests or previous experiences with occupational stereotyping could be alternative explanations for the underrepresentation of women in many math-related fields.

Subjects' Career Choices

Table 5 is a summary of the subjects' career choices. The nontraditional versus traditional variable was determined by assessing the number and percentage of students enrolled in all majors at Umpqua Community College (Hackett, Esposito & O'Halloran, 1989). Two-thirds of the subjects made traditional career choices.

Table 5

"Nontraditionality" of career choices.

"Nontraditionality" [1]	N = 15
Nontraditional	
Electronics Technician	1
Electrical Engineer	1
Occupational Therapist	1
Physical Therapist	1
Subtotal	4
Moderately Traditional	
Business Manager	1
Subtotal	1
Traditional	
Accountant	1
Medical Secretary	1
Nurse	4
Teacher	2
Counselor	2
Subtotal	10

(1) "Nontraditionality" of the subjects career choices were assessed as follows: Nontraditional if 33 percent or less of the college enrollees were women, moderately traditional if 34-65 percent were women, and traditional if 66 percent or more were women (Hackett, Esposito & O'Halloran, 1989).

However, these results suggest that "traditionality" may be losing some of its importance as a primary indicator of the quality of women's career choices for some employment sectors. The four subjects who chose nursing indicated that economic security and expected earnings were important factors in their decision. Although nursing remains a traditional female occupation, it has become economically competitive for women and men alike. In addition, nursing has increased its emphasis upon mathematics and science pre-requisites which have also been used to identify nontraditional occupations. This suggests, at least, that some traditionally female jobs may not necessarily be lower-paying and lower-status as is currently discussed in the literature (Chronicle of Higher Education Almanac, 1990; Hoyt, 1988).

Eight women stated that their current career choices were also their first career choices since enrolling full-time. Five subjects indicated these were their second career choices. Only two women indicated they had considered at least three career choices before their final selection. The large majority of women stated they had made their final career decisions two years ago at the time of their initial college enrollment or shortly thereafter.

Subjects' Descriptions of How They Made Career Decisions

The first interview question asked subjects to

discuss how they had made a career decision and to
identify the influencing factors that had impacted this
decision. Their responses underscored their sensitivity
and awareness of the complexity of the career choice
process. As previously suggested in the literature
(Bingham, 1983), the subjects relied heavily on their
reflection of past experiences to determine their likes
and dislikes, skills and abilities. The women appeared
assertive and confident in sharing how they had made
these difficult decisions. All subjects, except one,
stated that their career choices were definite--a point
which they emphasized. The subject who was "tentative"
about her specific choice was "definite" about the
general career area. Furthermore, 13 of the 15 subjects
had filed an intent to graduate with an associate's
degree in June of 1992.

The subjects ranked economic security as their most
influencing career choice factor. Over two-thirds of the
subjects stated that money and economic security impacted
their career decisions. Closely related to this was the
subjects' desire for "stability." One-third of the
subjects cited job stability as a deciding factor along
with economic security. Although economic return has not
been recognized as a primary career choice factor in
career choice theory (Betz & Fitzgerald, 1987; Fassinger,
1985 & 1990), it was a persistent and pervasive theme in

the information provided by the subjects. This supports Peterson and Roscoe's (1983) findings that three of the five most frequently cited factors influencing the career choices of women were economically motivated.

Subjects frequently indicated the need to "become educated" so they could obtain employment to support their families and themselves. Nine subjects tied their return to college to economic security, as illustrated by these responses:

> The lumber industry started talking about things weren't going well, the strike and the reduction in pay and a number of things. We decided that this might not be a career to see him to retirement.

> Once I knew I wouldn't make it in my marriage and I could only find minimum wage jobs, I knew I couldn't support my family on this, and I had to seek an education.

> I had gone back to work, and I found out that I needed more training in order to get a good job. I had no computer experience, and I felt completely stupid.

> I kind of formulated a plan. I knew I had to get my GED, and I knew I needed to raise my math levels. My marriage was on the rocks, and I started thinking, "If I don't do something I'm going to be trapped in a situation I don't want to be in." Being trapped is a combination of economics and being trapped in a relationship--you have no choices without an education.

These responses are in agreement with Mohney and Anderson's (1988) findings that the timing for women returning to college was determined by the state of their relationships. However, the motivation factor appeared stronger in this group of subjects.

Money and economic security were also mentioned indirectly, such as, "I have a one and half-year old daughter, and I want to take care of both of us." Another subject summed up the importance of money by saying her daughter influenced her the most and that she "wanted to be able to support her" if anything happened to her husband so she "needed a job that pays good." Two subjects summed up why many women choose nursing as a career. First, there are "only a few who are not [in nursing] because of the economics." Second, "no matter what the economic status of the state, nursing is one field where you will always be able to find a job."

For others, stability was ranked first, but their descriptions included economic security:

> The fact that jobs are going to be there. If not here, somewhere. My husband works in the timber industry, and so we don't expect his job to last. He's had some lay-offs and I had a job for a trucking outfit which is also timber-related, and we didn't think we could both keep that.

One explanation for economic security as the most influencing career choice factor may be the dramatic changes happening in the labor sector. Previously, virtually no education was required to obtain a family wage job. Previous work experience and the individual's character often satisfied minimum requirements. This was typical of rural communities dependent on one or two industries, such as agriculture or forestry. Today these jobs are fewer and often require technical training and

degrees if a family wage is to be achieved. For disadvantaged women who are heads of households, economic security is even more critical.

An interest in the subject area was identified by one-third of the women as an influencing factor. Confirming the literature (Lassalle & Spokane, 1987), career choices seemed to be facilitated by previous work experience. However, low-income status did not suggest the resulting insularity and emphasis on caretaking skills in expressing vocational interests as indicated by Groves, Cassella, and Jacobs (1982). Two women reflected on how they had narrowed their choices:

> I had worked on computers just as an input clerk, but that was a start. Then, I became a single parent and the kinds of jobs I could get were not conducive to raising a child or making a decent living. I decided I needed a better job, but to get that better job I had to get into a field where I had to get further education. I also have physical problems, so I can't do heavy duty work, but I used to be an aircraft mechanic and I love mechanics. I also love the electronics part--so pretty well those three together, my interest in computers, mechanics and electronics, I thought well, ok, let's go into this field [digital electronics]. I was still leery about going into the [computer] maintenance field, but I started taking courses in programming and it was fascinating to me. I got to thinking, "Why is this happening? What's going on in the computer when you press an A and why does it flash up on the screen?" So I decided to go along with digital electronics.

> I'd been involved in the health field, and I knew I wanted to stay in that area. And, I didn't know what I wanted to do, but I'm an artistic person, and I really enjoy that aspect of my life. So I went into the counseling service and took their tests, a bunch of different tests to show what you score well

in, and I found occupational therapy. I found out
about occupational therapy and how they deal with
the mental as well as the physical aspects of being.
I've always been interested in holistic health, and
I found out that the rehabilitation of motor skills
incorporates mental, psychosocial, and physical
aspects of healing. In therapy you can use artistic
means of rehabilitation such as music and sculpture.
At that point I knew that was what I wanted to do.

In addition to an interest in the subject area and
previous related work experience, career interest and
aptitude tests helped four other subjects examine their
career choices. One subject had always liked working
with numbers and "after taking some career interest
tests, as well as the academic placement tests, was
pointed toward accounting." Another found that
everything "clicked" as a result of completing
personality and interest tests in an "Introduction to
Education" class. One nursing student stated she was
apprehensive about going back to college, but came in
"straight from pruning grapes" after she called the
college for help. As a result of aptitude and career
interest tests, she became interested in nursing.

According to Weihe (1980), reentry community college
women may engage in more career information seeking
behavior when counselor intervention, including testing,
is introduced. However, subjects in this study making
career choices with the assistance of career-related
testing did not necessarily choose traditional careers.
This differs with previous studies (Houser & Garvey,

1983; Sauter, Seidl, & Karbon, 1980), which have suggested that counselor bias serves to perpetuate limited and more traditional career choices for women.

Subjects indicated they were also somewhat influenced by friends or family in their career choices. This influence was minimal compared to other factors, and the influence of parents was never mentioned. One subject stated her two brothers, who are successful in business, helped her decide on business management because she views herself as "independent" and wants to travel. Another subject stated she "had to set some realistic goals" and having family members in nursing helped her choose nursing as a career goal.

Previous work experience influenced several subjects in their eventual career choices. One subject described how she chose to pursue being a secondary education teacher:

> I went to Alaska, to the North Slopes, when I was 21 years old. I worked there one year, and the early childhood education teacher job opened up. They couldn't get a teacher and offered me the job. At that time I was already working with the kids in the gym. The North Slope was a rich district, and the pay was excellent. I had 12 children in the class--three and four years old. When I first came to UCC, I planned to major in elementary education but then I realized I was tired of tying shoes and dealing with the parents of the kids instead of the kids themselves. I always knew I wanted to go back to school and, after Alaska, when I was at Head Start I knew I couldn't survive there. I had also researched opening a day care, but I realized there wasn't much of a future there either.

Another woman stated that "I've been doing my job in

drug and alcohol treatment for six years, but I have to have the degree." She had become involved in this area as a result of a vocational rehabilitation job placement when she could not continue her work as a food service worker.

For one woman, her past personal experience drew her to psychology. "The things that I have gone through as a child and as a battered wife has had an impact. Seeing others like me, I kept thinking there had to be someone, somewhere to help them." However, another woman turned away from her initial interest in psychology toward a business major because she concluded:

> I realized I had been through counseling myself and I'd had enough exposure to all that (laughing). I realized then that I had looked to this field because it was something safe, something I knew. But, enough is enough, and I want to shift to something else. I can still help with Battered Person's Advocacy on my own time.

Subjects in this study were also interested in the personal challenges and growth their careers would offer:

> I want something that is constantly changing. I want to do research and development. At first money was a primary factor, to be comfortable and not to struggle. Now I know I can achieve that, and it is not as important.

> I decided that I didn't want to work in the mill for the rest of my life. I like a challenge of having things done right and of having a say in how I do my job, and this is not done in the mill.

> I like the fact that I have the ability to grow in this job (alcohol and drug counselor), as compared to many jobs I have had, such as food service.

These descriptions of how the subjects made their

career choices provided an overall insight as to how they made their decisions.

Influence of Families on Career Choices

The subjects were asked several questions to determine the influence their families may have had on their career choices. Family encouragement, in general, and especially female parental influence, have been shown to be major factors in helping women plan careers (Farmer, 1985; Weishaar, Green, & Craighead, 1981). For disadvantaged women, support is more important, since the chances are greater that they will be homemakers and have fewer career-oriented role models (Falkowski & Falk, 1983).

Only four of the subjects felt that they received any encouragement to pursue a college education. Eleven subjects indicated they had no encouragement.

> None [definite statement]. Out of 7 children I'm the only one to graduate from high school. My mother, brothers and sisters live a completely different life-style. I think this is why it is so hard on me in college. I wasn't brought up with an enthusiasm for education.

> It was always basically the girl gets married and the boy goes out for sports. There was no support until my separation, and my folks wanted me to go to electrolysis school. I didn't choose this career, they did. They felt it would be some kind of security, and I didn't stand up for myself [education major].

> My father has been a minister all his life [without completing his high school education], and believes the woman's place is in the home; my brothers went into the ministry so they received a lot of support.

I was really angry a lot of years at my dad for his
not letting me go to college right away.

I was raised in a very dysfunctional family. I
never got any encouragement to pursue an education.
I've had to battle self-esteem, and I still do.
When I first started college my husband and I had to
work through a lot of fear. I was able to convince
him that getting an education wouldn't be a threat
[subject has a 4.0 GPA].

When asked who in their personal lives had the

greatest influence on their career choices, two-thirds of

the subjects stated "no one" or, more often, simply "me."

There was basically a feeling of unsettling--the
soul wasn't setting right and something inside
wasn't quite happy. When I went back to school that
feeling left.

I think it was just myself wanting to get
into a field and wanting to have an education and to
be comfortable.

Me [definite statement followed by a laugh]. I
reached the realization that no man was going to
take care of me, no matter what my father had said
[laughing]; I was going to have to make it on my
own.

These responses differed with conclusions drawn by

Weishaar, Green and Craighead (1981) that females,

especially those making traditional career choices, were

more likely to choose their mothers' as having the

greatest influence. In this study, there was frequent

conflict about the pursuit of college and career choices

between the subjects and their spouses or parents.

Some subjects did identify a significant other who,

although not influential on their career choices,

supported their decision to go to college. One subject

stated that, "I made the choice, and once I made it, I got the support from my family." Another commented, "I did get some support when I made the decision, but none before that."

This absence of family support appeared to result from little value being placed on education. Two-thirds of both mothers and fathers ended their education with no more than high school diplomas, although six subjects were uncertain of the educational attainment of their parents (Table 6). Since eleven subjects lived with both parents through their high school years, the value of an education may have been seldom discussed.

Considering the 12 subjects who had been or were married, three did not know the educational attainment of their spouses. The majority had completed high school; one was presently attending college.

In contrast to their families' educational backgrounds, the subjects in this study were aware of their parents' and spouses' work histories. All subjects' mothers had worked for several years outside the home. Thirteen mothers had combined homemaking with work outside the home in "pink-collar" entry-level jobs, generally in food service, or had assisted their husbands. Two mothers had held "white-collar" jobs in teaching and nursing. These results supported Cherlin's (1980) findings that daughters of lower-status working

Table 6

Parents' educational attainment.

Educational Level (1)	Father	Mother
Eighth grade	3	1
Some high school	3	5
High school diploma	4	5
Some college	2	1
Associate degree	-	2
College degree	2	1
Total	14	15

1 Six subjects were uncertain of the education levels achieved by their parents; data reflects their closest estimates.

mothers are more work-oriented than are daughters of homemakers.

Likewise, the majority of the subjects' fathers and spouses had worked in "blue-collar" jobs. Only four fathers held positions which today might be referred to as "white-collar" in the fields of pharmacy, teaching, business and the ministry; however, the pharmacist completed only high school and served an apprenticeship, and the minister did not complete high school. Five fathers had "blue-collar" jobs in the timber industry, three were farmers, one was a truckdriver, and two were in various entry-level occupations.

Subjects who were or are married had spouses who most often also held blue-collar jobs. Six were in the timber industry. Only two held positions which could be considered "white-collar": an insurance adjuster and a paramedic.

Falkowski and Falk (1983) found that disadvantaged women would more likely migrate toward homemaker positions. Fewer rural, lower-status women with fathers and spouses in manual occupations seek employment outside the home. To the contrary, the majority of subjects did not view homemaking as a career.

> Homemaking is work and productive work, but it is not a career. Careers are employment with compensation.

> Homemaking is great, but I don't think that in this day and age it's possible to view it as a career. I

think you have to work if you plan on surviving.

I never perceived homemaking as a career. I
gave it about a two-year shot and wound up seeing a
counselor--it was driving me crazy. I didn't have
friends. I admire people who do consider homemaking
as a career.

I hate to say it, but I never thought of homemaking
as a career. I had a daycare business at one time.
I never did want to stay home.

Homemaking is something that came as a shock
[laughing]. I thought it would be this
companionship responsibility. He came home from
work the first day after we were married and asked
where dinner was. I had just got home too and it
was, "Well, it's wherever you can find it; go get
it yourself." I had no idea this was definitely my
responsibility. I'd had roommates before and that
was fine. I started realizing then what this
[homemaking] was all about. My children are well
adjusted and happy, but homemaking is a chore, not
a career.

Homemaking was the only option I was given. A lot
of women in college reach the point of resentment
because they have been told so long that homemaking
is all they can do and are supposed to do. I went
through the experience of my husband burning my
homework, taking the car and firing the baby-sitter
to try to keep me from college. I went through a
lot of adversity, but I was determined.

I was very definite. I wanted to be single. Now,
I'd like to get back into a marriage, but I'm very
selective. I have always seen homemaking as a
career. I think homemaking was a put-down, but I
now see more men out there doing homemaking. I
think the homemaker is the backbone of the family,
but most women now will have some years they will
have to work.

The Environmental Influence

One subject laughed as she expressed in one sentence

the profound impact that the American social environment

has had on many women:

Being raised--it was boys did this and girls did that--so just being born and raised [laughs] is my experience with occupational discrimination and stereotyping.

Although several women did not seem to want to acknowledge how gender differences may have directly impacted their own eventual career choices, their responses indicated they had been impacted. Through their examples, the majority of subjects in the study cited experiences with discrimination or occupational stereotyping. They generally started talking about their own families when asked to indicate if they had been discouraged from pursuing certain careers.

In my heart I know now that their best wasn't in my best interest or enough for me. My dad kept saying, "Well, [subjects' brothers] you need to get back into school or get out of this area." I remember stopping and saying, "Well, Dad, what about me?" Growing up I always felt like an invisible child.

For another woman, her childhood and "growing up" years were spent being trained and strictly raised to be a "subservient woman." She and her mother literally "waited" on her father and brothers. A second woman remembered her first attempt to work as a teenager:

All of us kids worked for my dad after school. My father refused to allow me to work as a flag man. He said the flag man has enough trouble keeping from getting hit by a car, and he didn't need people looking at me and not paying attention to where they were going.

Out of their experiences, some subjects became even more determined. One subject found it "felt wrong" to learn that her husband's family was chauvinistic and that

women are expected to "stay home, keep their mouths shut and raise the children." As a result, she had found that she did a lot of things, such as firefighting during the summers, to "prove that I could do what I wanted" because she "had an attitude problem toward someone who said I couldn't do something."

One subject switched career choices from merchandising to education primarily as a result of difficult work experiences. She had sometimes dealt with discrimination by not acknowledging it and laughingly stated that "out of stubbornness" she had not followed the "rules" all the time:

> It is tougher in fields like business and merchandising where people getting promoted are not women. When it becomes obvious and irritating you can get a chip on your shoulder. This is partly why I hated merchandising because I was angry all the time.

Subjects in this study lend support to Astin's (1984) "structure of opportunity" model, which suggests that changes in the nation's economy, and more women seeking paid employment, would encourage broader career choices than women had learned earlier in life. However, entry by women into nontraditional career areas has not been without difficulty. Three subjects illustrated their experiences with job stereotyping and discrimination:

> In insurance, discrimination was notorious--my supervisor told me I was very lucky to be in a position I had, because insurance was totally

changing its way of doing business from using outside male adjusters, who visited clients, to inside adjusters. When insurance went to an inside adjuster they saw that they could pay women less.

In the mill, most jobs are open for women if they can do the job. But, women are harrassed in some jobs--like being a spreader. There aren't very many spreaders, and the men just don't think women should be there at all.

I felt intimidated on my job with [an electronics firm]. At first I thought it was just me, and then he [my boss] made a comment about me not having hose on under my pants. I felt so uncomfortable about it I went to Personnel to ask if I was breaking the rules. The next day I got fired. I found out later that this had happened to others. When the company changed management he lost his job.

Subjects who had not perceived that they had experienced stereotyping or discrimination still believed it existed. Two women stated that they felt this was because they had only had entry-level jobs that were for women. They did notice that "it was always the man that got the boss'job."

Although the majority of subjects felt that they could not eliminate the adverse impact of occupational stereotyping and discrimination on themselves, they did recognize it. However, their responses suggested that to admit stereotyping and discrimination had affected their eventual career choices would be harmful to their own self-concepts. This appeared evident in their consistently awkward negative responses when asked if stereotyping and occupational discrimination had affected their career choices.

The subjects in this study had a more tolerant and a more feminist attitude toward women's roles in society. They generally favored a more nontraditional, egalitarian view of women's roles and a lessening of stereotypical behavior between the genders. This behavior appeared to be indicative of their strong sense of independence, persistence and determination.

Their scores on the shortened, 15-item version of Spence and Helmreich's (1978) Attitude Toward Women's Rights and Roles Scale ranged from 27 to 43 points on a possible 0 to 45 range. The mean was 35.4, and the median was 37. Five subjects scored above 40 points. Higher scores reflected a more egalitarian attitude; lower scores more traditional, stereotypical attitudes. Stafford (1984) found this behavior to be a strong predictor of increased career involvement and labor force participation. This suggests that the subjects may be more career-oriented and consider a larger number of career choices as a result of their attitudes toward other women in society.

As can be predicted, subjects in this study have had extensive work involvement. All subjects had worked, and the majority had several years of full-time experience. Most common were minimum wage occupations in food service, secretarial-clerical positions, retail sales, day care, and forestry. Above entry-level employment

included the military, office manager, bookkeeper, baker, rehabilitation group leader and mill worker. One subject had previously been employed as an early childhood education instructor. These experiences should enhance their chances of reaching their career goals. Lassalle and Spokane (1987) concluded that, for women, more consistent and extensive work experience facilitates further career advancement. However, for the subjects in this study, their limited exposure to work beyond minimum wage suggests further advancement may be more difficult without further education.

Satisfying a variety of needs through work has been an important consideration in career choice, especially for women (Dawis & Lofquist, 1984). Subjects in this study shared the importance of a monetary reward, as well as their desire to use their talents for intrinsic reward.

> Pay. Satisfaction and feeling of accomplishment. Working with people, not behind a desk.

> The biggest thing is self-achievement and also being productive in society. I think we each need rewards for ourselves and part of this is working. Accomplishing certain goals and self-esteem are factors. Helping someone who has a debilitating disease--that would be really rewarding to see them gain function of their bodies and become more self-reliant. The money factor is important, but it's not at the top.

> I feel like I need to be productive, and I want my kids to see me being productive. I want to be working in something for fun and that I am good at. Communication. Social. The ability to use the God-given gift of my brains. The monetary aspect is

very strong, but I think this is more important.

When I was in high school I thought my education was really poor. Learning and self-esteem are now my focus and what I want to give to others. Being independent and role modeling for my kids is important too. At first, work was what you had to do to support your family and it was more of a negative connotation. Now, you have to enjoy it. You need to enjoy it, but it has to have some criteria to support my family.

Money was a persistent influence on the career choice of this study group. However, it was not the only influence. When asked about their most important life objective, the subjects were evenly split between the importance of family and satisfaction for themselves. Subjects cited the desire to be happy and "to strive for self-mastery" and to "just have some peace in my life" or to have "lived honestly." Others reflected the importance of setting a good example for their children or to help people "to know God and the place God has in our lives."

Their responses varied from the most recent American Council on Education survey (Astin, Green, Korn & Schalit, 1987) which indicated that community college women ranked "to be well-off financially" as their first life objective. Instead, this study found subjects more in agreement with the results of an earlier American Council on Education study, conducted in 1977, which found "raising their families" as most important. This pronounced difference in responses may suggest this group

of subjects aspires to achieve a reasonable balance in all aspects of their lives. Their backgrounds and responses indicate that they have overcome difficult circumstances which tend to result in a heightened awareness of realism.

Readiness to Make Career Choices

Super's (1981) Career Development Inventory was completed by the subjects to assess their readiness to make sound career choices. As used in this study, group means and standard scores were obtained and compared to national norms (Appendix F). The subjects substantially exceeded the national norms in career planning, career development attitudes, career exploration and career orientation. They scored lower than the norm on world-of-work information, career development knowledge and skills, career decision making and knowledge of preferred occupation.

The subjects scored very high (ninety-first percentile) in career planning. Subjects seemed to understand the importance of career planning and to be ready for other career education activities. The high score on this variable is not surprising, given the age and maturity of the subjects in comparison to the general college population with which the national norms were developed.

The subjects' awareness of the need to look to the

future and make career plans was supported by their

willingness to relocate from their present geographical

location. Ten subjects indicated they would be willing

to move from this area. In fact, eight subjects stated

they preferred to move and planned to relocate elsewhere

in Oregon or outside of Oregon when their education was

completed. One subject summed up the position of several

during her interview:

> I've got myself out of a rut. I'm still low-income
> and I'm still working up, but I need to move on and
> still grow and I just have to let go and move on.
> There are just too many people and too many things
> that could pull me down. I felt this a few years
> ago, but I was afraid, and I didn't want to hurt
> people's feelings.

This finding differs from those of Rosenfeld and others

(1985) who stated that disadvantaged women living in

rural areas would tend to be more conservative, more

family oriented, and less likely to move.

The career exploration scale, ranking the local

group at the top of the average range at the sixty-eighth

national percentile, revealed an overall mature attitude

toward locating and using sources of occupational

information. The study group also scored very high

(eighty-third percentile) on the career development

attitudes scale. The career development attitudes scale

combines scores on the career planning and career

exploration scales and is more reliable as a measure of

attitude.

The subjects scored well above the national average (seventieth percentile) on the career orientation total. The career orientation total is viewed as a composite measure of four aspects of career maturity: career planning, career exploration, decision making and world-of-work information. Of all the combined scores, the career orientation total is considered the most important. The subjects appeared to have a higher than average level of "readiness" to make career decisions.

On the other hand, the subjects' scores on world-of-work information fell at the forty-sixth percentile. Subjects tended to be more naive about the mores of the world of work and how people get jobs and adjust to work environments. More information about the range of occupations open to them may have helped them to make better decisions. This is not surprising, since all but one subject had lived in the college district for over five years. Two-thirds of the subjects had spent their "growing up" years there. As is typical of rural communities in southwestern Oregon, the major industries of forestry and agriculture and the relative geographic isolation have served to limit their awareness of world-of-work information.

The decision making scale assessed the subjects' ability to apply the principles of career planning in various situations. The subjects could have used some

assistance (fortieth percentile) in learning a systematic decision making process and may not have been as ready to use career information as effectively. They could have also benefitted from learning more about how to identify career problems and knowing what information is needed to form solutions.

The career development knowledge and skills scale totals combines the decision making and world-of-work information scales. This combination makes a more concise cognitive scale and is considered more reliable than each scale alone. Subjects in this study scored in the middle range (forty-second percentile) of scores. The subjects may have made better career decisions if they had had more knowledge of occupations, including work mores and values.

The knowledge of preferred occupation scale is designed to assess familiarity with the type of work desired. The subjects scored below the average range (thirty-fifth percentile). Subjects needed help in learning more about the career fields they were interested in and could have profited from added aptitude tests or vocational interest inventories. More in-depth career exploration of career choices would have helped.

Although the subjects appeared to have a high level of "readiness" and desire to make career decisions, they had difficulty making vocational choices. These results

could be typical for a returning, older, female, rural population with little exposure to a variety of jobs and previous work experiences. Because of this naivete to occupational options, Betz (1989) argues that a more direct approach may be desirable in counseling returning women with limited career information.

Influence of Education

Education has been shown to be one of the most important influencing factors in women's eventual career choices (Betz & Fitzgerald, 1987), especially in providing role models. However, in this study, two-thirds of the subjects indicated that no particular individual in education had a great influence on their career choices. The five remaining subjects only briefly mentioned faculty, counselors and administrators. This is not to imply that the subjects did not feel supported by faculty and counselors. They overwhelmingly indicated that faculty was generally supportive when asked, "How do you perceive the attitude of the faculty regarding helping you with your endeavors in the classroom?"

> I feel like the support the college faculty and counselors are giving me is what I never got from my own family. When I'm down or not here they let me know they care.

> I've had some faculty who have stepped out of their bounds and took time with me and showed me things.

> If it weren't for the friendliness, the attitude, I probably wouldn't be here. Everyone is eager to help.

The faculty is appreciative of having older
students, we're more centered and balanced in what
we want to do.

This feeling of support in the classroom differs

with Freeman's (1975) concept of the "null academic

environment." Freeman found in her studies that a

majority of university students of both genders perceived

the faculty as generally unsupportive. Results of this

study suggest that the community college environment

could be different. A supportive attitude appeared to

encourage the subjects' academic success and assist them

in the further development of their self-concept.

Two subjects indicated that some faculty "put down"

(Bernard 1976) students:

> There are some faculty who are almost pushing me,
> saying "you can do it, don't give up." Then there
> are some who I take a question to, and they might
> answer it, but it's with an attitude like, "good
> grief, don't you know that?" "Why are you so dumb?"
> It's like, "I don't have time for that garbage, get
> it out of here."

> Most faculty are supportive, but some see themselves
> on a pedestal. We're all here to learn, and I feel
> the best thing the faculty can do is to help us
> learn. I have been made to feel like I was stupid,
> but I don't think that happens too often.

In contrast to their experiences with the faculty,

fewer subjects turned to counselors for assistance in

career decision making. One-half of the subjects in this

study stated they had not worked with a counselor. Five

subjects found the counselors supportive, but two

indicated the counselors "don't have enough time to be

really supportive" and they "didn't know more than what was in the book" when it came to answering her specific career questions. These responses are not unexpected, since the college has only four full-time counselors who also serve as teaching faculty. The diversity of the community college population has mandated an emphasis upon student entrance assessment, academic faculty advising, and crisis intervention counseling, which leaves little time for career counseling.

Support from the student financial aid program was mentioned by seven subjects as having a positive impact on their career plans. However, the subjects in this study generally did not feel restricted in their career options because of inadequate resources. Their responses simply indicated they would have considered different strategies to complete their education.

> It has helped me a lot, knowing it's [a secure source of money] there. Otherwise, I would have less confidence going to college full-time and I would have more to worry about. It would just be a slower process.

> Inside I wanted to do this type of work for a very long time, and I do not feel restricted in my career choice because of money.

> Money has always been tight. At first I felt restricted in my career choice, but not now. Money motivates me, but I feel it is more of a tool to get me from one thing to the next. I would still make the same career choice if circumstances were different and money was no object, but I would just be going to Harvard.

> I would have attended a university and got my bachelor's degree directly.

Although career choice decisions for women is recognized as a complex process, there is little understanding about how the influencing factors affect the choices of disadvantaged women returning to community colleges. This study was concerned with understanding how certain career choice factors influenced the career choices of this population.

These factors have been assessed through examination and analysis of qualitative information provided by returning disadvantaged female community college students. Based upon the discussion of the findings, the next chapter will present the summary and implications of this study.

IV. SUMMARY AND IMPLICATIONS

Summary

The purpose of this study was to determine how certain career choice factors influenced the career choices of disadvantaged female community college students. Prior research and speculation seems to indicate that six major factors influence career choices of women. These factors are: environmental variables, familial factors, individual abilities, self-concept variables, vocational interests and values, and the influence of education and counseling. On the other hand, the absence of a unifying theory to describe the relationships among the variables has made it difficult to weigh the relative importance of any one factor. While it has been acknowledged that being poor adds to the problems of reentry into education (Betz & Fitzgerald, 1987; Brown, Brooks, & Associates, 1984; Super, 1984), research on career choice has not addressed this population.

This study's population consisted of 53 female students attending Umpqua Community College in Roseburg, Oregon, who met all of the following criteria: enrolled full-time, had completed one academic year or forty-five quarter credits, were receiving federal Title IV student financial aid, and were 25 years or older. A random sample of 15 subjects was identified for this study.

The data were gathered through examination of the subjects' college student records, interviews and the subjects' completion of written questionnaires. The open-ended interview format allowed probing of issues in greater depth, which resulted in further questioning. The interviews were audiorecorded and transcribed for analysis. Individual interviews ranged in length from 50 minutes to two hours; the majority lasted about one hour. One of the two questionnaires used was the Career Development Inventory (Super, Thompson, Lindeman, Jordaan & Myers, 1981). This instrument assesses the overall readiness of subjects to make career decisions. The other questionnaire was the 15-item version of Spence and Helmreich's (1978) Attitude Toward Women's Rights and Roles Scale. It was used to measure attitudinal responses towards the rights, roles, and privileges that women ought to have or be permitted to have.

The data were analyzed to identify common patterns that related to the major career choice factors. Responses were summarized in relationship to stated and evolving questions to provide a description, analysis and interpretation for each factor studied. The qualitative data were first applied; the quantitative data were then used to verify the qualitative observations.

Factors which may influence the career choices of disadvantaged women returning to community colleges and

provided support for the literature included: high academic ability, a more tolerant and feminist attitude, a sense of independence, interest in planning for a career, and a supportive faculty. In addition, economic security ranked as the most often discussed motivating factor. Economic security had not been previously identified as an influencing factor.

The following factors were found to have less influence on career choices and, therefore, did not support previous research: success in mathematics courses, supportive parents and family, and educational role models. In addition, the absence of a familial value for education was identified. Although it did not appear to impact the subjects' current career choices, it appeared to have previously created a barrier to education.

Implications

As suggested, the relationship of mathematics requirements to career choices has implications for further study. Since these findings differ from previous research, the relative strength of mathematics as a career choice determinent should be examined.

Mathematics course completion can no longer be avoided in higher education. For this study group, averaging 35 years of age, most chose not to study mathematics in high school. However, the lives they

expected to live then are very different from the lives they are now living or aspire to live. Increased mathematics requirements for college degrees should be evaluated in relationship to their effects on the attitude and behavior of returning women attempting and completing mathematics courses.

Gender differences in advanced mathematics courses (above calculus) have consistently been suggested; however, the community college mission is technical and transfer-degree oriented. The majority of future jobs are predicted to require a two-year technical degree (Hoyt, 1988). The question should therefore be, "Are the abilities and achievements of this study group, successful disadvantaged returning females, different than other community college student populations?" Entering mathematics ability for all community college students should be examined to determine if all disadvantaged returning females are different, particularly those who do not succeed.

The results of this study indicate that the use of traditional versus nontraditional career choices can no longer be used as a primary indicator of the quality of women's career decisions. Some careers considered traditional for women, such as nursing, now offer competitive expected earnings and a higher professional status. The importance and relevence of defining career

choices as traditional or nontraditional should be examined.

Further research concerning the relative strength and value of economics as a primary career choice indicator should be pursued. Results from this study clearly suggest that economic security and expected earnings is a viable career choice factor, whereas in the past it may have been viewed as a consequence of other career choice factors. It would also be useful to determine if the economic factor is specific to disadvantaged women returning to college or if it is also true of all older women returning to college regardless of socioeconomic status.

The absence of family influence and support appears to be a direct result of a diminished overall value placed on education. Rural families tend to perceive themselves to be more conservative and independent, and believe that the educational system is too liberal. As a consequence, education is not valued highly. Subjects in this study experienced a negative influence from their families. The familial influence should be studied and replicated with similiar populations. For example, it would be helpful to understand the relative strength and impact of this factor on the decision of disadvantaged women who withdraw from college or who do not attempt to enter or reenter.

Although the environmental influence was not determined in this study, it can be speculated that the breadth of career choices considered had to be at least somewhat influenced by this factor. There is a need for further investigation of this issue.

There is also a clear need to re-emphasize career counseling, and this can only be achieved in community colleges with the support of counselors, faculty members and administrators. Student success ultimately depends upon quality career choices. Current student support programs for academic assessment, faculty advising and crisis intervention need to be expanded to include career choice intervention strategies. This could be achieved by a combination of increased career-related testing, exploratory courses, workshops to learn about world-of-work information, and instruction for students about decision making and problem solving.

Career counseling appears to be a critical need for this population. Further research, by replicating use of the Career Development Inventory or other career maturity tests and testing specific career decision making strategies with different community college populations, could help establish how prevalent the need is. In addition, further study about how colleges presently assist students with career choices would be useful in identifying appropriate goals and standards for career

service programs.

The line of questioning did not appear to be sufficiently in-depth to adequately address the impact faculty may have on the career choice process. The influence of faculty should be closely examined in an effort to determine how they may indirectly or directly affect career choices through the development of students' self-esteem, self-concepts, and vocational world-of-work knowledge.

Although there is no accepted theory of career choice for women, studies related to singular career choice factors have achieved some consistency in their findings with traditional-aged university female students. The findings of this study demonstrate that the career choice factors may produce somewhat different results for disadvantaged women returning to community colleges. These findings support the position that a unifying theory of career choice for women remains premature. Further identification and explanations of the career choice variables for disadvantaged women deserves to be pursued vigorously.

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APPENDICES

Appendix   A

(Telephone Script)

Call student from selected list and verify their identity

Identify self

    - Name, Vice President for Student Services, UCC
    - Doctoral candidate at Oregon State University

Source of their randomly selected name

    - College student record data base

Purpose and overview of study

    - Impact of returning female students on the college
    - To identify factors which influence women's career
      choices
    - To gather information which could be useful in
      improving career planning services for other
      female students

Explain that the study is in two parts:

    - Personal interview at the college for 1 to 2 hours
    - Two separate surveys requiring about one hour
      total to complete

Confirmation of participation

    - Ask student if she would be willing to volunteer
    - If not, thank her for her time and go to the
      next person on the list
    - If yes, identify an appointment time and close the
      conversation by stating that she will receive a
  letter confirming the appointment within a week
    - Thank the participant for her interest

Appendix B

(Participant Letter)

                                  (Date)

(Subject name and address)

Dear (Participant),

    Thank you for agreeing to participate in my study
about community college student career choices. I look
forward to our interview appointment as follows:

            Day of week, month and day
            Time
            Room and campus building

    As I described on the telephone, the large numbers
of women who return to college are having a significant
impact on Umpqua Community College. Your participation
will help me increase my understanding about how
returning women make career choices.

    The study is divided into two parts. Our interview
will focus on factors which influenced your career
choice. The second part of this study is the survey
instrument which focuses on attributes related to career
choice. I will provide you with the survey after our
interview.

    Again, thank you for your assistance. Please call
if you have questions at 440-4677 (work) or 672-5927
(home).

                       Sincerely,

                       Jacky M. Hagan, Graduate Student
                       Oregon State University

Appendix C

(Cover Letter and Survey Instrument)

(Date)

(Subject name and address)

Dear (Participant),

Thank you for agreeing to provide additional information about yourself by completing the enclosed survey focusing on attributes related to the career choice process.

While completing the survey should only take an hour or so of your time, you may have reservations about providing personal information. Please be assured that procedures have been designed to insure confidentiality for all participants. The survey has an identification number for mailing purposes only. Your identity will never be revealed.

As I stated to you on the telephone, your participation in this study is voluntary. You are one of a small group of students who are being asked to give an opinion on this issue. You were randomly selected from among several students. Your return of the completed survey will be regarded as your continued intent to participate. Please return the completed survey in the stamped pre-addressed envelope. Please note it is important that you answer all of the questions.

If you have questions, please call me at 440-4600 or 672-5927. I would appreciate your return of the survey by _____.

Thank You Again,

Jacky M. Hagan, Graduate Student
Oregon State University

Attitudes Toward Women   ID_____

    The statements listed below describe attitudes toward
the role of women in society which different people have.
There are no right or wrong answers, only opinions. You
are asked to express your feelings about each statement
by indicating whether you (AS) Agree strongly, (A) Agree
mildly, (D) Disagree mildly, or (DS) Disagree strongly.
Please indicate your opinion by placing a check on the
line over the category which best describes your personal
attitude. Please respond to every item.

            AS-Agree strongly   A-Agree mildly
            D-Disagree mildly   DS-Disagree strongly

1. Swearing and obscenity are more repulsive in the
speech of a woman than a man.

        _____   _____   _____   _____
         AS   A   D   DS

2. Under modern economic conditions with women being
active outside the home, men should share in household
tasks such as washing dishes and doing the laundry.

        _____   _____   _____   _____
         AS   A   D   DS

3. It is insulting to women to have the "obey" clause
remain in the marriage service.

        _____   _____   _____   _____
         AS   A   D   DS

4. A woman should be as free as a man to propose
marriage.

        _____   _____   _____   _____
         AS   A   D   DS

5. Women should worry less about their rights and more
about becoming good wives and mothers.

        _____   _____   _____   _____
         AS   A   D   DS

6. Women earning as much as their dates should bear
equally the expense when they go out together.

        _____   _____   _____   _____
         AS   A   D   DS

7. Women should assume their rightful place in business
and all the professions along with men.

        _____   _____   _____   _____
         AS   A   D   DS

AS-Agree strongly   A-Agree mildly
D-Disagree mildly   DS-Disagree strongly

8. A woman should not expect to go to exactly the same places or to have quite the same freedom of action as a man.

AS	A	D	DS

9. Sons in a family should be given more encouragement to go to college than daughters.

AS	A	D	DS

10. It is ridiculous for a woman to run a locomotive and for a man to darn socks.

AS	A	D	DS

11. In general, the father should have greater authority than the mother in the bringing up of children.

AS	A	D	DS

12. The intellectual leadership of a community should be largely in the hands of men.

AS	A	D	DS

13. Economic and social freedom is worth far more to women than acceptance of the ideal of femininity which has been set by men.

AS	A	D	DS

14. There are many jobs in which men should be given preference over women in being hired or promoted.

AS	A	D	DS

15. Women should be given equal opportunity with men for apprenticeship in various trades.

AS	A	D	DS

Used with permission of Spence, J. T. & Helmreich, R. L., The University of Texas at Austin, August 22, 1991.

Appendix   D

(Interview Script)

Factors Influencing Career Choices
of Returning Disadvantaged Female Community College Students

Interview Script

The purpose of this interview is to obtain information
about the factors which may influence the career choices
of returning female community college students. As
included in the consent agreement, all information will
be kept confidential.

1. Tell me about your career choice (if you have made
one) and how you made this decision. What factors
impacted your decision the most? If you have not made a
career choice, what factors do you think will impact your
decision the most?

Have you made a fairly definite career choice?
Tentative? Are you undecided?

If you have made a definite career choice, is this your
first career choice at this college? If not, how many
have you made?

When did you first decide on this career choice?

Did you, at one time, perceive homemaking as a
career? If so, what is your perspective now?

2. What kind of encouragement did you get from your
family to pursue a college education?

Were you raised in a two parent home for the majority of
your youth?

Tell me about your parents. (Follow-up with questions
below if prompting is needed.)

What has been your father's occupation during most of his life?

What has been your mother's occupation during most of her life?

What was your father's highest level of education?

What was your mother's highest level of education?

If you have been, or are now married, what was/is the occupation of your spouse (or "significant other")?

What was your previous husband's (or present husband, or significant other's) highest level of education?

Who in your personal life has had the greatest influence on your career choice?

3. Did a recent significant event in your life affect your return to college? If so, what was it?

Have you experienced or observed any occupational sterotyping or discrimination which discourages you or other females from pursuing certain career options?

Will you consider relocation from this area when you have completed your education? If not, how has this affected your career choice?

4. What do you see as the rewards of working?

What do you view as your most important life objective?

Have you been employed part-time or full-time outside the home? If so, describe your complete work history, beginning with the most recent job.

How long have you lived in this college district?

If you moved to this district within the past 5 years, was your former residence urban or rural? Was it smaller or larger than Roseburg?

5. How do you perceive the attitude of the faculty at UCC regarding helping you with your career decision? the counselors?

Do you feel the faculty is generally supportive, unsupportive or indifferent towards your endeavors in the classroom?

Who in education, if anyone, has had the greatest positive influence on your career choice?

What college services were helpful, if any, in assisting you with your career plans?

6. Have college mathematics requirements affected your career choice?

How do you think women feel about mathematics? If needed, ask "Do you think female students avoid mathematics courses?" If so, why?

7. Would you be willing to tell me about your marital history?

If you are married, or have ever been married, at what age did you first marry?

If you are married, is your husband currently disabled, employed or unemployed?

How long have you been separated, divorced or widowed?

How many times, in total, have you been married?

Do you have children? How many and what are their ages?

8. How has having enough money to attend college
impacted your career choice?

Have you felt restricted in your career options because
of inadequate finances?

This concludes my interview questions. Thank you for
your assistance. At this time I will review the
directions for completing the two surveys. (Discuss the
attitudes toward women and the career development
inventory instruments.)

Appendix E

(Thank-you Letter)

(Date)

(Subject name and address)

Dear (Participant),

Please allow me to express my appreciation for your participation in my study about community college student career choices. As a result of your contributions, I will increase my understanding about how to improve career planning services for future students.

(Insert individualized personal note)

(Insert the following paragraph for those requesting research results)
The final research report should be available by June, 1992 and the results will be made available to you then.

Again, thank you for your generous assistance.

Sincerely,

Jacky M. Hagan, Graduate Student
Oregon State University

Appendix F

(Career Development Inventory: Means and Percentile Ranges by Subtest for Local and National Populations)

Subtest:	Local Subjects:		National
	Mean Percentile	Range of Percentiles	Range of Percentiles
Career Planning	91	51 - 99	35 - 65
Career Exploration	68	11 - 98	33 - 67
Career Decision Making	40	10 - 91	30 - 70
World-of-Work Information	46	1 - 98	27 - 73
Career Development Attitudes	83	41 - 99	38 - 62
Career Development Knowledge	42	1 - 99	27 - 73
Career Orientation Total	70	20 - 99	38 - 62
Knowledge of Preferred Occupations	35	1 - 94	30 - 70