The results of a study of the self-efficacy of 59 male and 71 female students, at a midsized western university, using a psychometric assessment instrument called the Career Attitude Survey (CAS) developed for the study, may be summarized as follows: (1) females but not males exhibited greater self-efficacy for traditional female occupations than nontraditional occupations; (2) females were more confident that they could combine home/family responsibilities with a traditional career than with a nontraditional career, whereas males showed no differences in confidence in their ability to combine family responsibilities with traditional or nontraditional occupations; (3) females considered traditional occupations more frequently than nontraditional occupations, whereas males considered nontraditional occupations more frequently than traditional female occupations. (Self-efficacy was considered to be the belief in one's ability to perform a given behavior successfully.) The CAS included descriptions of 10 traditionally female occupations and 10 traditionally male occupations. Subjects used a five-point Likert scale to rate themselves along the three dimensions for each occupation. Internal consistency coefficients (alpha) for the CAS were .8914, .9123, and .6324. (A 17-item bibliography concludes the document.) (CML)
Sex Differences in Career Self-Efficacy

Sue A. Stickel
Shippensburg University

Rhonda M. Bonett
University of Wyoming

Paper presented at the 1989 Annual Meeting of the
American Educational Research Association
San Francisco
March 27 - 31
Tenets of social cognitive theory as applied to career development have been gaining empirical attention since the mid 1970's. Social cognitive theory is concerned with the reciprocal interaction between environment, person, and cognitive mediating processes. The mediating process of self-efficacy (Bandura, 1977, 1982, 1986) as it relates to career development has been the subject of research since the early 1980's. This research has related self-efficacy expectations to the complex career development of women. Empirical evidence suggests that self-efficacy may become increasingly useful in explaining gender differences in vocational behavior. This study attempted to add to this evidence by considering self-efficacy as it related to the perceived ability to combine a career with home and family.

Bandura (1977) defined self-efficacy as the belief in one's ability to successfully perform a given behavior. This expectation influences thought patterns, actions, and emotional arousal and results in an integrated course of action (Bandura, 1982). Emphasis is on the action resulting from the perception of ability to perform the task. This assessment of efficacy by the individual will determine whether behavior will be initiated, the amount of effort expended, and how obstacles will be overcome.

Hackett and Betz (1981) first proposed self-efficacy as an important variable in the career development of women. They suggested that traditional socialization results in differences between men and women in the areas of performance.
accomplishments, vicarious learning, emotional arousal, and verbal persuasion. Women's greater involvement in domestic activities may result in higher self-efficacy for domestic tasks and lower self-efficacy for other areas. The lack of female role models in many male dominated (nontraditional) careers restricts the opportunity for vicarious learning from the success of others.

The relational component, self in relation to others, is intended to explain why men become oriented to nonfamilial roles, or careers, and women to the family. Gilligan (1977) posited that there are two paths of development. One path, more characteristic of women is based on relationships and connectedness. The contrasting path, typified by men, is characterized by logic, individuality, and rights. Vondracek, Lerner, and Schulenberg (1986) stated that this notion that males center their identity primarily around agentic concerns and that females center identities around interpersonal relational concerns has become recognized in vocational psychology.

**Review of Literature**

Betz and Hackett (1981) first investigated the relationship of self efficacy expectations to women's continued lack of representation in professional and managerial occupations. Results indicated significant and consistent sex differences in self-efficacy concerning traditional and nontraditional occupations. Both sexes indicated significantly greater self-efficacy for those careers traditionally held by their respective
sex. Men reported equivalent self-efficacy for traditional and nontraditional occupations, while women reported substantially lower self-efficacy relative to nontraditional occupations.

Subsequent research has tended to support these gender differences. Wheeler (1983) examined the relationship between the proportion of males in an occupation, self-efficacy, and gender consideration of that occupational area. Results indicated that both males and females perceived male-dominated occupations as more difficult for success, however the perception was stronger for females. Reported test-retest reliability for the self-efficacy scales utilized in this study ranged from .726 to .771.

Layton (1984) considered the relationship between locus of control, self-efficacy expectations, and women's career behavior. As in the Betz and Hackett (1981) study, women reported higher self-efficacy for traditional careers. Self-efficacy for nontraditional careers was found to be related to internal locus of control. Similarly, Nevill and Schlecker (1988) found strong self-efficacy expectations and assertiveness to be associated with nontraditional occupations but not with traditional ones. However, traditionality of the job was a more important factor in career choice than either level of self-efficacy or assertiveness.

Clement (1987) utilized a similar design to the Betz and Hackett (1981) study. Findings indicated that women have lower self-efficacy expectations than men with regard to traditional
male occupations. Men were found more reluctant to enter nontraditional careers. Test\retest reliability of the self-efficacy measure ranged from .74 to .89.

Studies considering the relational aspect are more diffuse. However, differences are suggested between men and women concerning the relationship of family concerns to career choice. Stonewater (1987) investigated the connection between Gilligan's theory to Holland themes. Women in this study had a greater tendency to be classified as Social or Conventional Holland personality types.

Farmer (1985) in a study of career motivation and adolescent women found a positive relationship between androgynous self-concept and long term career motivation. Archer (1985) found significant differences between adolescent males and females in the domain of family-career priorities. Males in the study were twice as likely to be diffuse about family roles. Females were more likely to be foreclosed and four times as likely to be in a moratorium or achieved status. Thus females more frequently questioned alternatives, such as careers, to family roles and males were twice as likely to lack investment in the family domain.

Objective

The purpose of this study was two-fold. First, a new psychometric measure of self-efficacy needed to be developed. Previous instruments of this type had unknown or low reliability
and validity. Many merely measured responses to occupational titles. A new assessment instrument, the Career Attitude Survey (CAS) was developed focusing on construct validity. The CAS utilizes descriptions of occupational requirements rather than titles alone. Split-half reliability analyses were performed with encouraging results.

Second, three theoretically important research hypotheses were evaluated. It was hypothesized that self efficacy among females but not males would be higher for traditional than nontraditional female occupations. Also, it was hypothesized that women but not men would believe they could combine a traditional career and a family, but less confident that they could do so if they pursued a nontraditional career. A third hypothesis was that females would consider traditional female occupations more frequently and that men would consider nontraditional occupations more frequently.

Method

Participants

The participants included 130 students, 71 women and 59 men, enrolled in introductory statistics, sociology, or education classes at a midsized western university. Participation in the study was voluntary. Subjects first completed a brief demographic questionnaire, then responded to items on the Career Attitude Survey (CAS).
Instrument

The Career Attitude Survey (CAS) was designed to assess career related self-efficacy. The instrument includes short descriptions of 10 traditionally female and 10 traditionally male occupations. Based on U.S. census information from 1980, occupations that showed over 75% female employment were considered to be traditionally female, and those with over 75% male employment were considered traditionally male. Descriptions were modeled after those in the Occupational Outlook Handbook (1986). It was felt to be important that the traditional and nontraditional occupations be as similar as possible along a number of dimensions. Occupations were thus selected utilizing the following characteristics: physical demands, danger, stress/emotional demands, required knowledge of science and/or math, work schedule/flexibility and educational requirements.

Using a five point Likert scale, participants were asked to rate themselves along three dimensions for each occupation: (1) perceived ability to pursue the given occupation; (2) perceived ability to combine the occupation with home/family responsibilities; and, (3) the degree to which the occupation had ever been considered. Each subject received six scores, rating traditional and nontraditional occupations along each of the three dimensions. Reliability analysis of the three subscales yielded internal consistency coefficients (alpha) of .8914, .9123 and .6324
Procedure

The CAS was distributed to the participants during their scheduled class meeting time. The subjects were advised that confidentiality would be maintained and that their participation was voluntary. The surveys were collected immediately upon completion.

Results

Survey responses were scored along the three dimensions of (1) competence to perform a given occupation, 2) the ability to combine the occupation with family/home responsibilities relational, and 3) the degree to which the occupation had ever been considered. Responses were further categorized into traditional versus nontraditional occupations along each of the above dimensions. The six dependent variables were 1) Competence-Traditional, 2) Competence-Nontraditional, 3) Relational-traditional, 4) Relational-Nontraditional, 5) Considered-Traditional, 6) Considered-Nontraditional.

The first hypothesis that females but not males exhibit greater self-efficacy (competence) for traditional female occupations than nontraditional occupations was evaluated by means of a matched pairs t-test. The results were highly significant in the predicted direction for females (t=10.59, p<.001) and not significant as predicted for males (t=1.84, p<.05).

A second hypothesis that females are more confident that they can combine home/family responsibilities with a traditional
career than with a nontraditional career also was supported (t=-7.74, p<.001). Males showed no differences in their confidence in their abilities to combine family responsibilities with traditionally female or traditionally male careers (t=1.34, p<.187).

A third hypothesis that females consider traditional occupations more frequently than nontraditional occupations when making career decisions was supported by the present data (t=-5.71, p<.001). In addition, it was hypothesized that men consider nontraditional occupations more frequently than traditional female occupations. This hypothesis was confirmed (t=6.74, p<.001).

A stepwise regression analysis was performed to determine if any demographic variables (Gender, Marital Status, Number of Children, Age, Year in College, College Major, Grade Point average, Career Goal, Ethnicity, Birth Order, Mother's Educational Level, Father's Educational Level, Mother's Occupation, and Father's Occupation) were related to the six survey scores. With the exception of the sex differences reported above, Major predicted the Considered-Traditional score (t=2.024, p=.046), Father's Educational Level predicted the Relational-Nontraditional score (t=-2.151, p=.034), and Father's Occupation predicted the Considered-Nontraditional score (t=-4.417, p=.001).
Discussion

The present study resulted in the development of a measure of perceived career self-efficacy, a measure of competence with regard to combining a career with home/family responsibilities, and a measure of range of occupations considered. This highlights the interactive influence of the person and the environment, a concept emphasized by fundamental principles of social cognitive theory. The lower reliability of the Competence scale relative to the other two suggests that some revision of this portion of the CAS may be indicated prior to utilizing it in future research.

The findings of this study also support and extend the work of Betz and Hackett (1981) and others. Descriptions of occupations in this study were rendered as equivalent as possible concerning aspects which could seemingly interfere with home and family such as work schedules, danger, physical demands, and emotional stress. However women in the study felt greater efficacy for combining traditional occupations with home and family. Women may fail to pursue nontraditional occupations not only because they doubt their ability to perform the job's requirements, but because they doubt also their ability to combine such requirements with home\family responsibilities, a socially imposed expectation. Males may react to these societal pressures very differently which is suggested as a focus for further research.
Also significant is the implication of the current study's results for intervention strategies. According to Bandura's theory (1977), there are four means by which efficacy expectations may be acquired and modified: personal performance accomplishments, vicarious experiences, verbal persuasion, and emotional arousal. In terms of reducing the impact on career choice of home and family demands, perhaps a training program which focused on alternative methods of satisfying home/family needs is in order (verbal persuasion), or exposure to women who have successfully pursued nontraditional careers and satisfied family obligations as well (vicarious experience).

Interventions should be initiated early in the career decision-making process. In addition to addressing the issues related to combining a family with a nontraditional career, high school counselors working with young women should consider the importance of promoting self-efficacy in nontraditional academic subjects such as math and science which are components of many nontraditional occupations.
References


