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AUTHOR Lentz, Linda P.
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ABSTRACT

A 1980 study was conducted to determine those factors (educational background, career plans, family influence, parental background, and career salience) predictive of women's career involvement one year after college graduation. A second analysis further differentiated between the groups on the variable "commitment to working." Participants were 1979 female graduates of 15 small, private, liberal arts colleges in the northeastern United States that had three selectivity levels: selective, very selective, and highly selective. The mailed questionnaire included questions on the five factors under investigation. Discriminant analysis was used to determine factors predictive of career involvement (being employed in career of choice or attending graduate, medical, or law school in preparation for career of choice). Results indicated that actively choosing an occupation, undergraduate grade point average, and career salience at graduation were highly correlated with career involvement and desire to work. It was suggested that the career-involved woman is a mixture of the traditional female and the "new woman," a phenomenon that needs to be more closely researched. (Four tables and a graph are appended.) (YLB)

PREDICTING THE CAREER INVOLVEMENT OF WOMEN ONE YEAR AFTER COLLEGE GRADUATION

Linda P. Lentz
School of Human and Educational Services
Oakland University
Rochester, Michigan 48063

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American Educational Research Association
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Predicting the Career Involvement of Women
One Year after College Graduation

Women's participation in the workforce has shown a continuous increase from decade to decade. In 1950 only 29.6 percent of the workforce was female. By 1960 one-third of the labor force was composed of women. This percentage grew to 38.1 in 1970 and was at an all-time high of 42 percent in 1980.

Another way to look at the increasing participation of women in the workforce is to look at the percentage of women working. In 1947 one-third of the female population above the age of 16 was employed. By 1977 one-half the work-age population was in the labor force. Bureau of Labor Statistics projections indicate that this percentage may swell to 58.3 by 1990 (Smith, 1979).

Why are women entering the labor force in such large numbers? After an extensive review of the laterature and analysis of the data regarding women's participation, Smith (1979) suggests there are three categories of factors that impinge upon women's decisions to work outside the home--demographic, economic, and attitudinal. Demographic changes have occurred which include: (1) a smaller proportion of women who are married and living with their husband and (2) a decline in the proportion of women with young children. Increases in women's real wages, growth in the kinds of jobs acceptable to women or that are available to women, the likelihood of finding a job, husband's employment status, and inflation are economic factors that influence women's employment. Attitudes toward women who work and their ability to establish and maintain positive relationships with family members also seem to be related to women's increasing labor force participation, particularly for women with moderate and high family incomes.

Other researchers have cited the effects of marriage, children and sex-role attitudes on women's work participation (Bielby, 1978; Buckley & Rowe, 1978; Owings, Owings & Steczak, 1980; Waite and Spitze, 1978). Single women are more likely to

be employed regardless of the reason for their singleness (never married, divorce, separation, death). Employment tends to decline when there are young children in the home (under six years of age) and increases as the children become older. Also related to increased employment of women are women's sex-role attitudes; women who feel that they can be successful mothers and work outside the home are more apt to be employed.

The more education a woman has the more likely she is to be employed. Buckley and Rowe (1978) hypothesize that the more time and effort that has been invested in education, the more career salient is the women; i.e., the higher her commitment to a career, the greater the likelihood that her life style includes a career.

Vetter and Stockburger (1977) analyzed the career patterns of a national sample of women using two well known patterns that have been proposed for women's career development: the "leaving school-marriage-first child" pattern and Super's classification of career patterns for women. The latter classification has six patterns: stable homemaker, conventional, stable worker, double track, interrupted and unstable worker. The researchers found that continuously employed women had more education, more desirable job assignments, and greater personal income than noncontinuously employed women. Single women working continuously were even higher on these variables than married women.

Since continuity of employment appears to be a pertinent variable related to rewards received by women in their chosen occupation. it is important to identify the factors which are predictive of career involvement at various ages and stages of career development. This is particularly important for women who are college educated, those women who are most likely to create a life style that includes a career.

During the past few years I have been working with a sample of women who recently graduated from college (1979) and embarked upon their career paths.

Ninety-nine and three tenths percent of these women expect to hold paying jobs at least part of their adult lives. Thus, they constitute an excellent sample to use in a study of factors that predict career involvement at the early stage of career development.

The primary objective of this study is to discriminate between women who are career involved one year after college graduation and those who are not pursuing their chosen career at that time. Variables related to educational background, career plans, family influences, and parental background were proposed as correlates of career involvement. In addition, the subjects' career salience ratings at the time of graduation were hypothesized to be related to career involvement one year hence.

Because the study was carried out when the subjects were one year post-baccalaureate, it was recognized that career involvement might take several forms. Therefore, career involvement was defined as either being employed in the field in which one prefers to work or being enrolled in graduate or professional school in order to prepare for employment in the preferred field. Noncareer involved women were defined as those not meeting the criteria for classification as career involved.

A second goal of the study is to differentiate between women in the two groups (career involved, noncareer involved) on a second variable: commitment to working. Thus, functions differentiating between four groups will be determined: career involved women who in an ideal world prefer to work, career involved women who prefer not to work; noncareer involved women who prefer to be employed; and noncareer involved women who prefer not to work.

Method

Subjects

The subjects for the study are participants in a longitudinal study of differences in women's career salience with college type and college selectivity level serving as independent variables. The 1979 female graduates of fifteen, small, private, liberal arts colleges are the subjects. The institutions from which they come are located in the northeastern United States and are characterized by similar programs and costs. Although some of the colleges maintain their historical denominational affiliations, only those which operate as nondenominational institutions were included in the study.

Using Barron's Profiles of American Colleges (1973) women's colleges and coeducational colleges which fit the criteria stated above regarding size, type of college, type of program, geographic location, and cost were identified. Colleges of each type were then divided into three groups based upon their level of admission competitiveness (selective, very selective, highly selective) as defined by Barron.

> Selective Colleges: Students from the top 50% of the high school graduating class, median SAT scores 450 to 550, median ACT scores of 21 to 23.
>
> Very Selective Colleges: Students from the top 30% to 50% of the high school graduating class, median SAT scores 550 to 600, median ACT scores of 23 to 26.
>
> Highly Selective Colleges: Students from the top 20% to 30% of the high school graduating class, median SAT scores 600 to 675, median ACT scores of 26 to 28.

Within each cell of the research design defined by college type and selectivity level the colleges which fit the criteria of the study were compared using Astin's (1965) five Estimated Freshman Input Factors and eight Scores on the Environmental Assessment Technique. This comparison was accomplished by graphing the T-score of each variable for each college being considered for the study on a grid designed by Astin. The three colleges that appeared to be most similar within each

group were chosen by the researcher to be solicited for participation in the study. Greater detail about the selection of the 18 preferred colleges for the study are contained in the 1977 report by Lentz.

Letters explaining the study were sent to the presidents of the chosen colleges. These were followed by telephone calls and interviews at 16 institutions. Fourteen of the sixteen colleges agreed to participate in the original study. Rather than complete the research design with less similar, alternate colleges, the researcher opted for greater consistency and incomplete cells.

Prior to Phase II of the study, all 18 colleges were contacted and requested to participate in the 1979 and 1980 studies. The colleges in the 1975 study agreed to continue their involvement. In addition, the third very selective women's college originally selected for the study became a participant. The distribution of colleges and subjects for each phase of the longitudinal study is shown in Table 1. Subjects for this study are those women (N = 746) who participated in both Phase II and Phase III of the study.

Insert Table 1 about here

Instrumentation

The questionnaire used in this research was developed by Shirley Angrist and modified by this researcher to meet the needs of post-baccalaureate women. Questions were divided into four categories: educational background, career plans, family influences, and parental background. In addition, the eleven items comprising Angrist's Life Style Index (1971-1972), a measure of career salience, were embedded in the survey instrument. Subjects' ratings on the Life Style Index in 1979 served as a variable in this study. All the other variables were derived from the 1980 survey.

Angrist computed the test-retest reliability of the Life Style Index as .79 using the freshman through junior indices. When the sophomore through senior indices

were used in the computation, the test-retest reliability was .88. While Angrist presented no evidence of the instrument's validity, the rationale for the selection of items and the face validity of the items are consistent with definitions of career salience such as that provided by Masih (1967).

An item analysis on the Life Style Index was performed by this researcher. One item was found to be poor in discriminating between career salience and noncareer salience. The remaining items had point biserial correlations between .30 and .70, the recommended preference level (Ebel, 1965; Lindquist, 1951). The split-half reliability of the index was calculated as .78 while the Kuder-Richardson-21 reliability coefficient, the mean of all split-half coefficients resulting from different splittings of the index, was .685.

Procedures

At the time of graduation, 1979, senior women in the participating colleges were requested to participate in the study. The college contact person distributed the questionnaires to the women and asked their cooperation. At 14 colleges the questionnaires were returned to the college contact person who, in turn, forwarded them to the researcher. The other college requested its women to return the research instruments to the researcher using a business reply envelope supplied by the researcher. During the summer months a second questionnaire and a postage-paid envelope were sent to all nonrespondents. A response rate of 56.4 percent was received.

The 1980 study was conducted completely by mail using updated address lists furnished by the fifteen colleges. Letters were sent to the subjects explaining this phase of the study, requesting participation, and telling them that they would be receiving questionnaires soon. Two weeks later the survey instrument, with a postage-paid return envelope, was mailed. Reminders were sent to nonrespondents at two to three week intervals. In the event the questionnaire was misplaced or lost in the mail, the second reminder included another copy of the questionnaire and a return envelope. An overall response rate of 53.0 percent was obtained.

Data Analysis

To determine the factors predictive of career involvement one year after college graduation, discriminant analysis was used. Career involvement was defined as either being employed in the career of choice or attending graduate, medical or law school in preparation for the career of choice. Thirty-seven variables were used in the analysis, Table 2. These variables involved five categories: educational background, career plans, influence of family of procreation or attitudes related to that family, parental background, and career salience in 1979. In order to include the latter variable in the analysis, the sample was narrowed to the 746 subjects who participated in both the 1979 and 1980 phases of the longitudinal study. This pool of cases was sampled in order to obtain 231 cases in each group (career involved, noncareer involved).

Insert Table 2 about here

A second discriminant analysis was performed to differentiate between the career involved and noncareer involved women who, in an ideal world, prefer to spend their time working and those who prefer to concentrate on home/family or occupy their time with hobbies, clubs, volunteer work, etc. Thus, four groups were used in the analysis: women who are currently career involved and who in an ideal world want to work, women who don't want to work but are career involved now, women who are not career involved now but who want to work, and women who are not career involved and prefer not to work in the future. The thirty-seven variables entered into the analysis were the same as for the first analysis. The sample size was reduced to 240 in order to have equal groups of 60 subjects.

Results

The standardized canonical discriminant function coefficients for the variables which entered the discriminant function in the two-group case (career involved, noncareer involved) are reported in Table 3. The canonical correlation between the

predictor variables and the two group membership variables is 0.4904.

Insert Table 3 about here

The group centroids for career involved and noncareer involved women are -0.562 and 0.562 respectively. Use of the discriminate function for classification purposes reveals that 80.5% of the career involved women can be correctly predicted. Prediction of the noncareer involved women is less accurate, 64.5 percent.

Career involved women tend to have high cumulative grade point averages in their undergraduate years and attach importance to having a career. They are more likely than noncareer involved women to have made an active choice regarding the occupation they will pursue. Factors which are important to career involved women in choosing their occupations are: whether the occupation involves work with people; provides a stable, secure future; and has high prestige. They are relatively less concerned with whether the occupation has prospects of high income.

Mothers are important in predicting graduate women's career involvement. Career involved women tend to have mothers pursuing traditional occupations. Maternal attitudes also play a role in discriminating between career involved and noncareer involved women. Daughters who are career involved perceive that it is important to their mothers that they pursue a career. However, they do not appear to have a close relationship with their mothers since they perceive their mothers as criticizing them unfairly.

In the second analysis three discriminant functions were obtained to discriminate between the four groups (career involved-prefer to work, career involved-prefer not to work, noncareer involved-prefer to work, noncareer involved-prefer not to work). The first two functions are significant and account for 90.87 percent of the variance. The standardized canonical discriminant function coefficients and the canonical correlations for these functions are reported in Table 4.

Insert Table 4 about here

Plotting the group centroids in a plane graphically illustrates the differences between the four groups, Graph 1. Function I discriminates clearly between the career involved women who prefer to work and the noncareer involved who do not want to work. Career involved women who prefer not to work and those who are not currently working but prefer to work are separated by Function II.

Insert Graph 1 about here

Use of the discriminant functions to classify subjects indicates that 60.0 percent of the career involved women who prefer to work can be correctly grouped. Membership in the other three groups can be predicted with 55.0 percent accuracy.

Career involved women who prefer to work tend to be those who actively chose the occupation they wish to pursue rather than stumbled into the occupation by default. They are likely to have high grade point averages in the undergraduate years and to have scored high on career salience at the time of college graduation, which confirms the fact that for their own personal satisfaction they place a great deal of importance on having a career.

The career involved women who prefer not to work also have actively chosen their occupations. Those occupations tend to be traditional women's occupations and the women are less certain that they'll pursue the occupation.

Women who are noncareer involved but who prefer to work, may have actively chosen a career, which is likely to be nontraditional. They are fairly certain they'll pursue their chosen career and they attach importance to having a career.

Those women who have not consciously made a career choice are less likely to be career involved one year after college graduation. They attach less importance to having a career as a personal source of satisfaction and scored lower on career salience in 1979 when compared to career involved women.

Discussion

Career involvement differs from career salience. The former term is defined by a woman actively pursuing her chosen occupation or preparing for it through continuing education. Career salience refers to the priority a woman ascribes to having a career among other sources of personal satisfaction.

Angrist (1971-1972) based the Life Style Index on the assumption that women committed to a career are strongly motivated to prepare for and work in their chosen occupation. "Chosen" needs to be emphasized. Having chosen a career was the prime determinant of career involvement one year after college graduation. This means that women actively and consciously made a choice among occupations. They did not just flow with the group or take the first job offered to them irrespective of the area.

Characteristics of the chosen occupation are also predictive of career involvement. Women are beginning to value occupational characteristics that formerly were considered only by men. With the greater number of women entering the labor market and shouldering the responsibilities of supporting themselves and others they are beginning to think about the security and stability offered by the chosen occupation as well as the prestige it affords them. Recent work by Astin (1982) indicates that high salaries are becoming more important to women. This is not reflected in this study and may be related to the fact that these women appear to be experiencing some conflict between the traditional female role and the feminist expectations of the modern woman.

The career involved woman particularly seems to be a mixture of the traditional female and the "new woman." As a "new woman", or modern female, she attaches importance to having a career and has made a conscious choice among occupations. Like her male counterpart she values occupational prestige and the secure, stable future the chosen occupation can provide. However, like the traditional women, she prefers to work with people rather than alone or with things and she is less concerned with the income provided by the occupation.

While behavioral and attitudinal attributes of fathers did not enter the discriminant function, we can but wonder about the women's relationships with them. We get a little insight by looking at the role played by mother. Mothers tend to pursue traditional occupations and consider it important that their daughters pursue a career. Are they serving as role models for their daughters? Or, are we getting a glimpse of what has traditionally been called father identification when we find that career involved women perceive their mothers as being unfairly critical?

This mixture of traditional and modern values is a phenomon that needs to be more closely researched. Does it portray these women as confused over modern versus traditional values as a result of growing up during the height of the recent women's movement? Or, is it indicative of the multifaceted life of the modern woman and a pattern which we will see more often as women increasingly enter the workforce and pursue their career goals?

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Table 1

Distribution of Colleges and Subjects

	Number of Colleges			Number of Subjects		
	Phase I 1975	Phase II 1979	Phase III 1980	Phase I 1975	Phase II 1979	Phase III 1980
Women's Colleges						
Highly Selective	0	0	0	0	0	0
Very Selective	2	3	3	371	320	282
Selective	3	3	3	306	187	148
Coeducational Colleges						
Highly Selective	3	3	3	393	260	251
Very Selective	3	3	3	357	251	252
Selective	3	3	3	386	266	233

Table 2

Variables Used in Discriminant Analysis

Educational Background

- Cumulative grade point average at graduation

Career Plans

- Have actively chosen an occupation
- Traditionality of chosen occupation
- Certainty of pursuing chosen occupation
- Occupation has high prestige
- Occupation involves work with people rather than alone or with things
- Occupation has prospects of high income
- Occupation allows for use of special abilities and interests
- Occupation provides stable, secure, future
- Occupation suits parent's ideas of success
- Occupation involves helping
- Attaches importance to having a career
- Level of career aspiration

Family Influences

- Marital status
- Number of children
- Support of women's equality

Parental Background

Mother

- Mother is employed
- Traditionality of mother's occupation
- Mother's educational level
- Important to mother that daughter pursue a career
- Mother gives daughter advice
- Mother dismisses daughter's problems as unimportant
- Mother hard to talk to
- Mother helps daughter with her problems
- Mother often criticizes daughter unfairly
- Mother is a good listener
- Mother has little free time

Father

Father's educational level
Important to father that daughter pursue a career
Father gives daughter advice
Father dismisses daughter's problems as unimportant
Father hard to talk to
Father helps daughter with her problems
Father often criticizes daughter unfairly
Father is a good listener
Father has little free time

Career Salience

1979 score

Table 3

Standardized Discriminant Function Coefficients
for Career Involvement One Year after College Graduation

Variable	Coefficient
Cumulative grade point average	0.14985
Have actively chosen an occupation	0.80623
Importance attached to having a career	0.18576
Number of children	-0.11989
Important to mother that daughter pursue a career	0.19926
Occupation has high prestige	-0.22556
Occupation involves work with people rather than alone or with things	-0.17470
Occupation has prospects of high income	0.24659
Occupation provides stable, secure future	-0.23645
Mother often criticizes daughter unfairly	0.27881
Innovativeness of mother's occupation	-0.11397

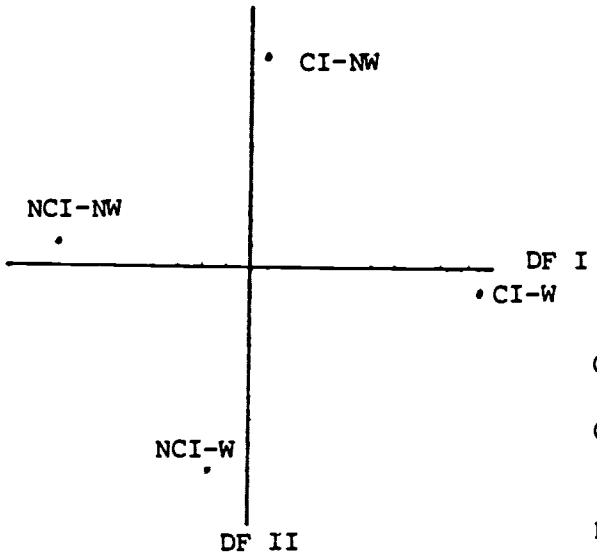
Table 4

Standardized Discriminant Function Coefficients
for Four Groups Defined by Career Involvement and Preference to Work
One Year After College Graduation

Variable	Discriminant Functions I	II
Cumulative grade point average	-0.26410	-0.07714
Have chosen an occupation	-0.71655	0.06295
Certainty of pursuing chosen occupation	-0.22513	0.54860
Importance attached to having a career	-0.49379	0.44878
Number of children	0.28985	-0.16012
Importance to mother that daughter pursue a career	-0.21131	-0.16738
Importance to father that daughter pursue a career	0.06239	-0.16285
Occupation has high prestige	-0.06786	0.37429
Occupation has prospects of high income	-0.41666	0.03800
Occupation provides stable, secure future	0.46515	0.03210
Occupation suits parents' ideas of success	0.08787	0.20860
Traditionality of occupation	-0.19863	0.39066
Mother is hard to talk to	0.06730	0.34069
Father given daughter advice	-0.03341	0.29009
Career salience - 1979	0.25639	-0.22527
Canonical Correlation	0.5345	0.4942

Graph 1

Centroids of Four Groups in Discriminate Plane



CI-W = Career Involved
Prefers to work
CI-NW = Career Involved
Prefers not to
work
NCI-W = Not Career Involved
Prefers to work
NCI-NW = Not Career Involved
Prefers not to work