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College Women's Career Commitment in Relation to Their Ego Identity Status

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ABSTRACT

The purpose of this study was to examine the relationships between college women's career commitment, their ego identity status, and aspects of their backgrounds. Major independent variables were academic classification, ego identity status, and perceptions of career-related barriers. Other independent variables were preferred future career pattern, academic ability, gender traditionality of academic major, family's socioeconomic status, length of mother's employment outside home, and frequency of changing major. The dependent variables were two dimensions of career commitment: the Tendency to Foreclose Scale (TTFS) and the Vocational Exploration and Commitment Scale (VECS).

Results showed that senior women were more developmentally advanced on career commitment, especially on the Tendency to Foreclose dimension. Freshmen scored higher than senior women in Moratorium Ego Identity Status, thus they seemed to experience more developmental tasks, but had not made any decisions. Other than that, no significant differences between freshmen and seniors were found in Ego Identity Status. In addition, Identity Achievement women scored significantly higher on the TTFS and significantly lower on the VECS than did Non-Identity Achievement women. Perceptions of increased career barriers were positively related to the VECS, but not for the TTFS. The longer a college woman's mother had been employed, the more commitment she had for her career choice. Other variables that made unique contributions to career commitment scores were academic classification, gender traditionality of academic major, and preferred future career pattern. Seniors were more committed to career choices than were freshmen. Women who chose more traditional female majors tended not to foreclose their career choices. Different preference of future career pattern had different levels of career commitment.

Key words: college women, career commitment, ego identity, career barriers, and career pattern.

INTRODUCTION

Commitment to career choices has been a process of developing options and specifying vocational plans. It has been one of the major developmental tasks of late adolescence and early adulthood (Erikson, 1968; Harren, 1979; Jepsen, 1984). According to Super(1980), college students were in the crucial stage where "identity" was developed and established. Chickering (1969) postulated that once identity is established, the stage of ˋ developing purposes ˊ which focuses on career development, will follow. Generally, the process culminates in a strong attachment or commitment to one's career choices (Gottfredson, 1981; Harren, 1979; Jordaan & Heyde, 1979). Other phases of career development process that have received attention are Slaney's (1988) and Osipow's (1987) research on career indecision and Harren's (1979) research on decision-making styles. Commitment to career choices, which is as important as other aspects, has not yet received attention (Blustein, Ellis & Devenis, 1989). This study was designed to address this gap in knowledge about career development and also to focus on career commitment among college women.

Identity Formation and Career Commitment

A study by Blustein, Devenis, and Kidney (1989), designed to test the relationships between the identity formation process and career development in late adolescence, found that (1) the occupational commitment is inversely related to the moratorium status, and (2) career exploration is positively associated with the moratorium and identityachieved statuses and inversely related to the diffusion status. This study was an attempt to replicate Blustein et al's (1989) study to find out whether identity status was significant in contributing women's commitment to career choices.

A two-factor model of commitment to career choices, postulated by Blustein, Ellis and Devenis (1989), was operationally defined in an inventory called the Commitment to Career Choices (CCCS). Two independent constructs describing the commitment process were (a) a Vocational Exploration and Commitment (VEC) dimension reflecting variation in one's level of commitment to career choices, and (b) a Tendency to Foreclose (TTF)

dimension defined as individual differences in how one commits to career choices. The former represented progress in the commitment process from an uncommitted exploratory to a highly committed phase. Higher scores on VECS meant greater uncertainty with regard to career choices. The second dimension was conceptualized on a continuum that ranges from an openness to the experiences of the commitment process to a closed, dualistic approach. Higher scores on TTFS represented a strong tendency to foreclose approaches to a given set of developmental tasks, such as choosing an occupation. Individuals attaining high level of commitment to a career choice, (1) had developed a specific plan for implementing their choices, and (2) were prepared to overcome obstacles to achieve their choices.

Any young person who had considered possibilities, experimented with different choices, and eventually made commitments regarding what to believe and what to become was considered, in Marcia's (1966) model, to be identity achieved. But three other possibilities remained for the college students. She or he may avoid the whole process, neither experiencing crisis nor forming commitments, thus remaining in a state of identity diffusion. Or a student may bypass the crisis and simply carry forward previously incorporated ideas and goals, thus having a foreclosed identity. Conversely, a student may be in a moratorium position, still experiencing crisis and unable as yet to forge commitments. The 64-item Extended Objective Measure of Ego Identity Status (EOM-EIS; Bennion & Adams, 1986) was used to assess the relative degree of prevalence of a given ego identity status.

Therefore, the second research question about the relationship between ego identity and career commitment was important theoretically because it seemed that college women with different ego identity statuses would have differences on their career commitment.

Antecedents to Career Commitment

Perceptions of Career Barriers.

Some factors, possibly the barriers, exist which result in the gap between women's academic abilities and their career achievement. Often the perception has been that women have neither career commitment nor career ambition (Brook, 1986).

College students' perceptions of barriers to career choice were examined by Swanson

and Tokar (1991a, 1991b) through factor analysis of two large sample surveys. The studies were based on the assumption that as students progress through a series of career exploration activities, they experience obstacles and attempt to cope with them so they can attain a high level of career commitment.

Preferred Future Career Pattern.

Super (1957) described seven career patterns of women:

(1) the stable homemaking pattern, characterizing women who married while in or shortly after leaving school and who had no significant work experience; (2) the conventional career pattern, characterizing women who worked outside the home only until marriage; (3) the stable working pattern, describing women who worked continuously over the life span and for whom work was their ‵career′; (4) the double-track career pattern, characterized by women who combined home and work roles continously: (5) the interrupted career pattern, characterized by a return to work later in life; (6) the unstable career pattern, described an irregular and repeated cycle of home versus work involvement; and (7) the multiple-trial career pattern, which consisted of an unstable job history.

Harmon (1967), in a 25-year follow-up study of University of Minnesota students, classified women's career patterns into five categories: (1) no job experience; (2) work experience only until marriage or the arrival of the first child; (3) combined work with marriage and children; (4) reentered the labor force when children were older; and (5) the single career women.

Gender Traditionality of Academic Major.

Career commitment has been noted to correspond to career continuity (Nieva & Gutek, 1982). Women's jobs have often been those that permit relatively easy entry and reentry. Teaching, nursing, and clerical work are included in this category. Conversely, women chose these jobs because they permitted short or intermittent periods in the labor market to accommodate family responsibilities (Brook, 1986). As a result, the work patterns of females were related to both the demands of the home and the nature of the labor force work (Armstrong & Armstrong, 1978). Because of this type of commitment to the labor force, women choosing traditional female majors were criticized as lacking career

commitment or achievement motivation (Farmer, 1985).

This study examined college women's anticipations about their preferred future career pattern five to ten years after graduation in using categories derived from Harmon's (1967) classification and Betz' (1984) finding.

Family's Socioeconomic Status.

Differences in social class have been linked to different socialization patterns in the family concerning parental influence on youths' occupational exploration (Grotevant & Cooper, 1988). The differences have been identified in children-rearing techniques (Adams & Jones, 1983). Lower-class parents have tended to rely on power-assertive techniques more heavily than do middle-class parents; and middle-class parents have tended to use inductive techniques more extensively than do lower-class parents (Hoffman, 1960). The consequence of this difference for career exploration has been that, in general, children raised in lower-class families are socialized into obedience and conformity, whereas children from middle-class families were encouraged to display initiative and self-motivation (Grotevant & Cooper, 1988).

Academic Ability.

The majority of women did outstanding academic work, beginning in elementary school and continuing through college (Hyde, 1985). In college, women consistently received higher grades in relation to their ACT scores and grade point averages. Even though that was true, their future career development was negatively affected by both the nature and the quality of the education they receive. Specifically, women began to avoid coursework in math and sciences as soon as such coursework became elective rather than required (Ernest, 1976). Usually in secondary school, and by college, women were concentrated in a narrower and narrower range of traditionally female majors (Pfafflin, 1984).

METHOD

Four research questions were: (1) Compared with college freshmen women, are college senior women more developmentally advanced on career commitment and in ego identity status? (2) How do ego identity statuses differ on career commitment? (3) How

are perceptions of career barriers related to career commitment? and (4) How are selected demographic factors related to career commitment and which make unique contributions in the prediction of career commitment among the following : (a) academic classification, (b) family's socioeconomic status, (c) length of parents' employment, (d) academic ability, (e) gender traditionality of academic major, (f) frequency of changing major, and (g) preferred future career pattern.

Sample

A simple random sample of 240 University of Iowa freshmen female students and 240 senior female students were invited to participate this study. The simple random sample was selected by computer generated random numbers through Administrative Data Processing at The University of Iowa based on four criteria: (1) gender, female only; (2) academic classification, freshmen or seniors only; (3) continuous enrollment (among freshmen, continuous enrollment from Summer/Fall semester of 1992 till Spring, 1993, and among seniors, continuous enrollment from Summer/Fall semester of 1989 till Spring, 1993); and (4) number, the selection was automatically stopped when the total sample numbers reached 240 for freshmen women and senior women, respectively.

Procedures

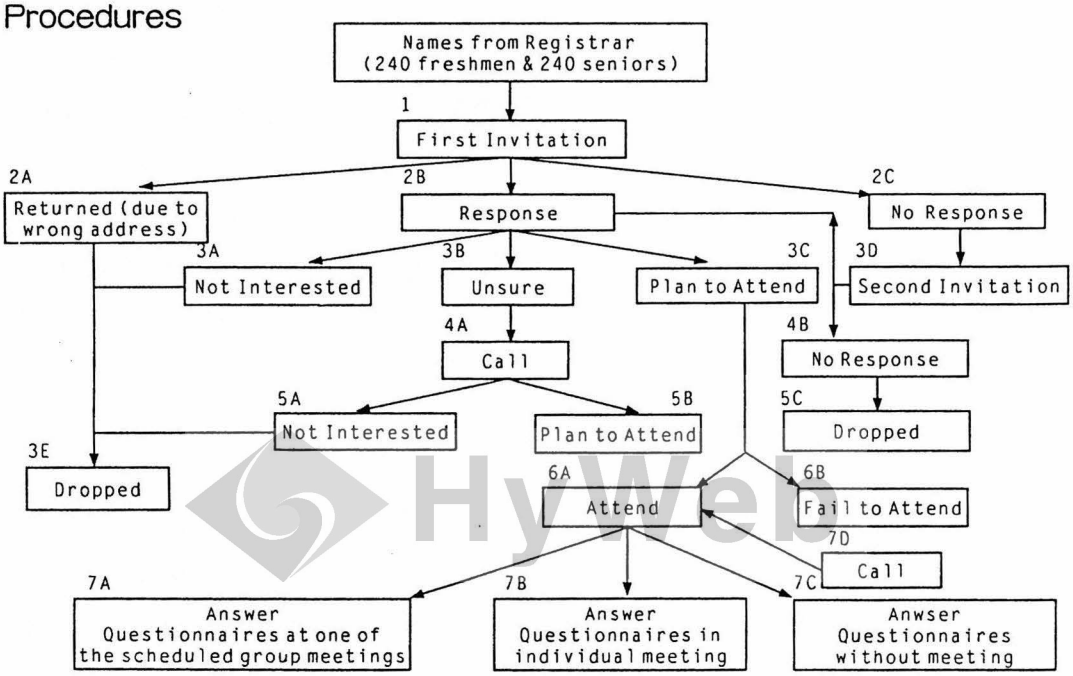

Figure 1. Data Collection Flow Chart

The actual response rate to the first invitation was 29.5%. More than half (52.1%) of the respondents agreed to participate in the study while 47.9% rejected the invitation to participate. The second invitations were sent out ten days later and the response rate (33.2 %) was almost four percent higher than the first time. The reason for this higher response rate may have been that the investigator added another choice " Send me the questionnaires, I'll answer and return to you by mail " in addition to the original " Yes ", " No ", and " Unsure " options. There were 38 students who requested the questionnaires be sent to them and 30 (78.9%) of them did mail the questionnaires back.

The total number of participants was 147 or 30.8 percent of total invited. Of the 147 participants, 68 (46%) were freshmen, 79 (54%) were seniors. The average ages for freshmen and seniors were 18.6 (SD=0.6) and 21.5 (SD=0.7), respectively.

Descriptions of Instruments

Dependent Variables

The dependent variables in this study were two scales from one instrument designed to measure Career Commitment. The Commitment to Career Choices Scale (CCCS), a 28-item instrument (see Appendix D) was developed by Blustein, Ellis, and Devenis (1989) to measure two distinct variables pertaining to the commitment process: (1) Vocational Exploration and Commitment Scale (VECS) and (2) Tendency to Foreclose Scale (TTFS). The former represented progress in the commitment process from an uncommitted exploratory to a highly committed phase. Higher scores on VECS meant greater uncertainty with regard to career choices. The second dimension was conceptualized on a continuum that ranged from an openness to the experiences of the commitment process to a closed, dualistic approach. Higher scores on TTFS represented a strong tendency to foreclose approaches to a given set of developmental tasks, such as choosing an occupation.

Blustein et al. (1989) studied 137 students' commitment to career choices using TTFS and VECS from a northeastern university and reported the test-retest reliability coefficients for the TTFS and VECS were .82 and .90 (2-week interval), and .84 and .92 (4-week interval), respectively. They concluded that there was clear support for the

construct validity because the scales consisting of statements that captured the array of attitudes and behaviors were proposed initially in the two-dimensional commitment to career choices model.

Independent Variables

The independent variables included: (1) ego identity status; (2) perceptions of career barriers; and (3) personal data, specifically, family's socioeconomic status, length of mother's employment outside home, acadimic ability, academic classification, gender traditionality of academic major, frequency of changing majors, and preferred future career pattern.

1. Ego Identity Status.

The 64-item Extended Objective Measure of Ego Identity Status (EOM-EIS; Bennion and Adams, 1986) was used to assess the relative degree of similarity to each of four ego identity statuses. These four ego identity statuses were labeled and defined as: (1) Identity achievement: the status of individuals who had gone through a period of exploration and had attained a firm commitment to their ego identity; (2) Moratorium: the status of individuals who were currently exploring, but had not yet committed to their ego identity; (3) Foreclosure: the status of individuals who have attained a firm level of commitment by adopting their parents' values without much deliberation or exploration; and (4) Diffusion: the status of individuals who were characterized by an absence of both exploration and commitment (Bennion and Adams, 1986).

Participants were asked to respond to these 64 items on a Likert scale of 1 (strongly disagree) to 6 (strongly agree).

The four 16-item subscales were found to have marginal to excellent internal consistency coefficients. The Cronbach alpha coefficients were 0.68 for Diffusion, 0.90 for Foreclosure, 0.73 for Moratorium, and 0.66 for Identity Achievement. Test re-test reliabilities over two weeks was 0.78 to 0.90 according to Blustein's personal communication from Adams in June, 1988 (Blustein et al., 1989).

Grotevant and Adams (1984) used 10 graduate students to find out that content validity of the EOM-EIS items was very satisfactory because the overall

mean percentage agreement across the 10 raters for the 64 items was 96.5%. They also found the results of factor analysis, the discriminant validity, and the concurrent validity of the EOM-EIS were good in using 317 college students from the University of Texas at Austin and 274 college students from Utah State University.

2. Career Barriers Inventory.

Using 558 students (313 females and 245 males) enrolled in three undergraduate psychology courses, the 102-item, 18-factor Career Barrier Inventory (CBI) designed by Swanson and Tokar (1991) assessed a wide range of barriers to career development college students perceive or anticipate. These barriers were labeled as (1) Self-concept, (2) Work and Family Role Conflict, (3) Discrimination, and (4) Discouragement/ Disapproval by others. Participants' responses to ` how do you perceive career barriers as obstacles impeding career success ´ were indicated on a Likert scale of 1 (Would not hinder at all) to 7 (Would completely hinder).

Swanson and Tokar (1991b) only reported the reliability of 18 factors and demonstrated that the 18 factorially derived scales were internally consistent with a median alpha reliability as .81 (from 0.53 to 0.94). Therefore, in this study the estimates of reliability of the CBI computed by the investigator revealed that alpha reliabilities of internal consistency for the four subscales are (1) .96 on 41-item Self-concept with mean=168.95, SD=38.99; (2) .96 on 44-item Role Conflict with mean=177.5, SD= 44.11; (3) .95 on 26-item Discrimination with mean=111.15, SD=31.14; and (4) .76 on Discouragement/Disapproval by others with mean= 21.78, SD=7.82.

The scales exhibited good convergent and discriminant validity because of the 102 items allocated to the 18 factor scales, 98 had their highest correlation with the scale to which they have been assigned; the remaining four items had correlations with their assigned scale which were essentially equal with one or more other scales (Swanson and Tokar, 1991b).

Personal Data

1. Family Socioeconomic Status.

Differences in social class have been linked to different socialization patterns in the family concerning parental influence on youths' occupational exploration (Grotevant & Cooper, 1988). The Siegel Prestige Scale (1971) has been widely used in sociology and its development based upon the assumption that ranking of occupations is socially defined.

The correlation coefficients among three raters ranged from 0.97 to 0.99 for fathers' social socioeconomic status (SES) and 0.91 to 0.94 for mothers' SES.

Siegel's prestige ranking of occupations has proven to be very stable over spans of several decades and over various subpopulations (Mueller & Parcel, 1981).

2. Length of Mother's Employment.

Subjects' self-report about the length of their mothers' employment outside home was categorized into five levels from the shortest (less than 5 years) to the longest (over 20 years). No reliability data were available on these self reports.

3. Academic Ability.

An American College Testing (ACT) composite score was obtained from student records with student's permissions. In addition to testing students' abilities of reasoning and problem solving, the ACT Assessment Program was also aimed at measuring their academic performance in assessing their verbal and mathematic abilities. Based on 729,606 high school graduating students in 1986, the internal consistency estimated for ACT composite score was 0.96. The stability estimated for ACT composite score was 0.86 to 0.90 (ACT, 1988).

4. Gender Traditionality of Academic Major.

Subjects' self-report about declared majors or preferred majors (if undecided), was categorized into three areas: traditional female majors (if more than 66.7% of the total students were females in a specific major), balanced male-female major (if the proportion of females ranged from 33.3% to 66.7% of total students in a specific major), or non-traditional female major (if less than 33.3% of the total students were females in a specific major). Three categories were developed based on the ratio of male- and female- graduates from a profile of students enrolled at The

University of Iowa (The University of Iowa, Registrar's office, 1993, p.21-25). No reliability data were available on these self reports.

5. Frequency of Changing Major.

Subjects' self-report about how often they had changed majors by declaring different major(s) through the Registrar's Office was used as a behavioral measure of their career commitment. No reliability data were available on these self reports.

6. Preferred Future Career Pattern.

Subjects' preference about their future career pattern, specifically what they prefer to happen 5 to 10 years after graduation, was measured by an instrument borrowed from Tittle (1981) by the investigator. Based on the classifications used by Super (1957) and Harmon (1967), the instrument included nine responses ranging from 〝working full-time, and remaining single〞 to 〝not working〞, plus 〝other〞 if there were other preferences.

Female students who were enrolled in an elective undergraduate course, entitled Making an Educational/Vocational Choice, were invited to participate in a pilot study. Twenty-one volunteers, either freshmen or seniors, were asked to choose only one preferred future career pattern among the ten alternatives. They completed the same scale after a 2-week interval. The 2-week test-retest reliability was computed by the investigator. The 10-item preferred future career pattern scale proved to be very stable with 0.87 (N=21) of Gamma coefficient . Gamma is a very robust statistical tool that has been used to quantify and describe the repetitive patterns of a specific factor (Mueller, Kunko, Whiteside, & Haskett, 1989). It has also been used to measure the degree of association between two ordinal variables (Berry, 1989).

Design and Analysis

A t-test, an ANOVA, a correlation analysis, and a regression analysis were used to answer the four research questions, respectively.

The principal results of the analyses can be summarized as the following: (1) demo-

graphic description of the study sample; (2) description of the study sample responses to Career Commitment and Ego Identity Status; (3) description of the study sample responses to the four research questions. The results are presented in detail in the following chapter.

RESULTS & DISSCUSSION

Results

Demographic Description of the Population

As shown in Table 1. 93% of the subjects was single, and the vast majority, 140(95%), were Caucasians. According to Siegel Prestige Score, the total mean score of SES for fathers of participants was 49.5 (SD=17.4). Typical occupations for this SES level are industrial engineering technicians (49.5), electricians (49.2), and health technologists and technicians (49.8). The total mean score of SES for mothers of participant was 47.1 (SD=12.9). Typical occupations for this SES level are housewife (46.9); art, drama, and music teachers (46.8); insurance agents, brokers, and underwriters (46.8), and bookkeepers (47.3).

Almost half of seniors (49.4%) had changed their majors at least once while 28% of freshmen did so.

Table 1
Means, Standard Deviations and Medians of Background Information

	Total (N=147)	Freshmen (N=68)	Seniors (N=79)
AGE (in years)			
Mean	20.2	18.6	21.5
SD	1.2	0.6	0.7
Median	21.0	19.0	21.0
Marital Status			
Single	137(93.2%)	67(98.5%)	70(88.6%)
Engaged	5 (3.4%)	1 (1.5%)	4 (5.1%)
Married, no kid	4 (2.7%)	0 (0.0%)	4 (5.1%)
Married with kid	1 (0.7%)	0 (0.0%)	1 (1.3%)
Ethnicity			
Caucasian	140(95.2%)	62(91.2%)	78(98.7%)

Asian American	5 (3.4%)	4 (5.9%)	1 (1.3%)
African American	1 (0.7%)	1 (1.5%)	0 (0.0%)
Native American	1 (0.7%)	1 (1.5%)	0 (0.0%)
Father's SES (Siegel's Prestige Score)			
Mean	49.5	47.7	51.1
SD	17.4	16.7	17.9
Median	50.8	50.6	54.2
Mother's SES (Siegel's Prestige Score)			
Mean	47.1	45.9	48.1
SD	12.9	11.8	13.8
Median	46.9	46.9	46.9
Years of Mother's Employment	N=144	N=67	N=77
Homemaker	16(11.1%)	9 (13.4%)	7 (8.9%)
< 5 years	8 (5.6%)	4 (5.9%)	4 (5.1%)
5-9 years	23(16.0%)	11 (16.2%)	12(15.2%)
10-14 years	31(21.5%)	15 (22.1%)	16(20.3%)
15-19 years	28(19.4%)	16 (23.5%)	12(15.2%)
≧ 20 years	38(26.4%)	12 (17.9%)	26(32.9%)
ACT Composite Score			
Mean	25.1	25.0	25.3
SD	3.5	3.4	3.6
Median	25.0	25.0	25.5
Major			
Traditional	44(29.9%)	16(23.5%)	28(35.4%)
Balanced	89(60.5%)	49(72.1%)	40(50.6%)
Non-traditional	14 (9.5%)	3 (4.4%)	11(13.9%)
Frequency of Changing Major(s)			
No changes	89(60.5%)	49(72.1%)	40(50.6%)
Number of changes			
Once	44(29.9%)	17(25.0%)	27(34.2%)
Twice	8 (5.4%)	2 (2.9%)	6 (7.6%)
Three Times or More	6 (4.1%)	0 (0.0%)	6 (7.6%)
Preferred Future Career Pattern			
Single & Career	12 (8.2%)	6 (8.8%)	6 (7.6%)
Career & Marriage	24(16.3%)	9(13.2%)	15(19.0%)
Combination	103(70.1%)	51(75.0%)	52(65.8%)
Others	8 (5.4%)	2 (2.9%)	6 (7.6%)

The question ‵ What is your preferred career pattern five to ten years after graduation? ″ provided nine possible responses plus an ‵ other ″ category. The distribution of their responses is shown in Table 2. The number of women preferring any particular career pattern ranged from only one preferring ‵ not working ″ to 37 (25.2%) preferring ‵ working full time, married and having children. ″ In other words, about one fourth of the respondents preferred to ‵ have it all ″ : career, spouse and children.

It was apparent that proportionally more freshmen (51 or 75.0%) than seniors (52 or 65.8%) preferred combining career, spouse, and children. In addition, proportionally more seniors (17 or 21.5%) than freshmen (12 or 17.6%) preferred the pattern of working full time until childbearing, then changing to part-time job while children are young, then returning to full-time work.

Table 2
Number and Percentage Choosing
Preferred Future Career Patterns

Preferred Future Career Pattern	Total N	Total %	Fr. N	Fr. %	Sr. N	Sr. %
Working full time, and remaining single.	12	8.2	6	8.8	6	7.6
Working full time, married.	24	16.3	9	13.2	15	19.0
Working full time, married and having children.	37	25.2	21	30.9	16	20.3
Working full time until marriage or childbearing, quit the job, will not work except for financial reason.	2	1.4	1	1.5	1	1.3
Working full time until childbearing, quit job when children are young, then return to full time work.	23	15.6	12	17.6	11	13.9
Working full time until childbearing, quit job when chikdren are young, then return to part time work.	14	9.5	6	8.8	8	10.1

Working full time until childbearing, then change to part-time job when children are young, then return to full time work.	29	19.7	12	17.6	17	21.5
Working part time until marriage or childbearing, quit the job, planning not to return to work any more.	1	0.7	0	0.0	1	1.3
Not working	1	0.7	0	0.0	1	1.3
Other*	4	2.7	1	1.5	3	3.8
Total	147	100.0	68	100.0	79	100.0

* Four chose "other" : 1) working full time, children with or without marriage ; 2) working part time indefinitely; 3) working not more than 30 hours, marriage eventually with kids, always working part time; and 4) working full time, uncertain about marriage and children.

Description of career commitment

The scores on the measures of career commitment, the TTFS and VECS are reported in Table 3. Freshmen scored (M=27.46, SD=8.58) significantly higher, $F(1, 66)=7.23$, $p<.01$, than did seniors (M=23.62, SD=8.66) on TTFS. With a mean of 60.03 (SD=23.81) on VECS, freshmen scored about the same as seniors (M=55.59, SD=20.40), $F(1,66)=1.48$, $p>.05$.

Table 3

Means, Standard Deviations, and Summary of ANOVA on VECS and TTFS

Source		Mean	SD	MSe	F	P
TTFS	Freshmen (N=68)	27.46	8.58	74.40	7.23	.008**
	Seniors (N=79)	23.62	8.66			
	Total Sample (N=147)	25.39	8.81			
VECS	Freshmen (N=68)	60.03	23.81	485.98	1.48	.226
	Seniors (N=79)	55.59	20.40			
	Total Sample (N=147)	57.65	22.08			

Note. High scores on VECS reflect an uncommitted posture with respect to commitment to career choices. High scores on TTFS indicate a strong tendency to foreclose on career choices.

Description of Ego Identity Status

The distributions of four ego identity statuses are presented in Table 4. When the ego identity statuses for the 147 college women were categorized by raw scores, 123 (83.7 %) were identified as Identity Achievement, 20 (13.6%) were identified as Moratorium, 4 (2.7%) were identified as Identity Diffusion, and none was identified as Foreclosure.

Due to the very small proportion of Moratorium status and Identity Diffusion status students (plus none identified as Foreclosure status), the four ego identity statuses were merged into two statuses: Non-Identity Achievement and Identity Achievement.

Table 4

Number, Percentage, Means and Standard Deviations of Ego Identity Status Scores

Identified Status			Identity Achievement		Moratorium		Foreclosure		Identity Diffusion	
	N	%	M	SD	M	SD	M	SD	M	SD
Identity Achievement										
Total	123	83.7	66.06	7.62	48.63	7.79	32.74	9.74	39.94	8.05
Freshmen	55	37.4	69.40	7.12	50.71	7.35	32.18	8.78	40.55	7.81
Seniors	68	46.3	66.97	7.88	46.96	7.77	31.57	10.37	39.46	8.27
Moratorium										
Total	20	13.6	52.25	4.99	62.60	6.95	28.10	10.00	46.55	7.54
Freshmen	11	7.5	54.36	4.25	65.18	7.29	31.64	10.63	47.18	7.00
Seniors	9	6.1	49.67	4.80	59.44	5.27	23.78	7.61	45.78	8.51
Identity Diffusion										
Total	4	2.7	47.00	7.12	50.75	9.22	22.50	7.55	60.00	10.89
Freshmen	2	1.4	52.00	1.41	55.00	1.41	23.00	9.90	68.00	7.07
Seniors	2	1.4	42.00	7.07	46.50	13.44	22.00	8.49	62.00	7.07

A chi-square test showed there were no significant difference between the classes regarding the proportion of the two ego identity statuses ($X^2(1)=.72$, N=147, P=.40).

㈣ Description of Career Barriers

As shown in Table 5, seniors scored very similar to freshmen's regarding to each aspect of career barriers. And correlations among the four perceptions of career barriers scales were significantly high ranging from .56 to .89 as indicated in Table 5. Thus, the four scales appeared to be indicators of a singular characteristic. In this study, those four scales were merged and treated as one single factor named Perceptions of Career Barriers. Participants' scores on 102 items are added as the indicator of their perceptions of career barriers. Their total scores ranged from 102 to 714 with the mean score of 411.39 (SD= 92.21).

Table 5
Means, Standard Deviations and Intercorrelations of Perceptions of Career Barriers Scales

Perceptions of Career Barriers Scale	Total Sample N=147 M	SD	Freshmen N=68 M	SD	Seniors N=79 M	SD	Self-concept	Role Conflict	Discrimination	Discouragement/ Disapproval by Others
self-concept	168.95	39.00	167.91	36.85	170.15	41.59	---	.74**	.72**	.68**
Role Conflict	177.50	44.11	176.67	42.32	178.47	46.40	.74**	---	.89**	.58**
Discrimination	111.15	31.14	112.09	31.48	110.06	30.95	.79**	.84**	---	.56**[a]
Discouragement/Disapproval by Others	21.78	7.82	22.56	8.29	20.88	7.21	.59**	.63**	.69**[b]	---
Total Perceptions of Career Barriers	411.39	92.21	412.56	96.53	410.38	88.93	.92**	.93**	.89**	.72**

** p<.01
[a] the above diagonal represented freshmen's (N=68) scores.
[b] the below diagonal represented seniors' (N=79) scores.

Responses to Research Questions

Developmental Differences Between Academic Classification

As shown in Table 3, freshmen women had significantly higher scores than senior women on the TTFS, $F(1, 145) = 7.23$, $p<.009$. There were, however, no significant

differences on the VECS, F(1, 145) = 1.48. The results showed that freshmen women had significantly stronger tendency to foreclose on occupational alternatives than seniors did. However, the differences of identity development between freshmen and seniors were not statistically significant.

Relationship Between Career Commitment and Ego Identity Status

As indicated in Table 6. there was no interaction between Academic Classification and Ego Identity Status. The main effect of Ego Identity Status revealed that women in Identity Achievement status scored (M=26.19, SD=8.91, N=123) significantly higher than did women in Non-Identity Achievement status on TTFS(M=21.33, SD=7.11, N=24), F (1.145)=6.32, P< .05. Women in Non-Identity Achievement status scored(M=82.27, SD= 22.23)Significantly higher than did women in Identity Achievement status on VECS (M= 52.82, SD=18.62), F(1, 145) =46.78, p<.0001.

Contrary to Marcia's (1966) assumption, this result found that women in Identity Achievement status had a strong tendency to foreclose occupational options, thus they were uncommitted to their career choices.

Vocational Exploration and Commitment (VEC), the other domain of career commitment, was also significantly associated with ego identity status. College women identified as Identity Achievement scored much lower on VECS than did Non-Identity Achievement women.

Table 6
Summary of ANOVA for TTFS and VECS
by Ego Identity Status and Academic Classification

Main Effect	df	MS TTFS	MS VECS	F TTFS	F VECS
Academic Classification	1	7.58	.86	8.57**	.83
Ego Identity Status	1	6.78	46.97	7.67**	45.56**
Interaction					
Academic Classification x Ego Identity Status	1	.04	1.03	.41	.81
Error	143	.88	1.03		

** p<.01

Relationship Between Career Commitment and Perceptions of Career Barriers

As shown in Table 7 , for the total group, the combined scale assessing Perceptions of Career Barriers was positively related to the Vocational Exploration and Commitment Scale, r=.30, p<.01. The similar pattern of association was found for freshmen r=.29, p <.05, and seniors r=.30, p<.01. College women who perceived career-related barriers, such as self-concept, Role Conflict, Discrimination and Discouragement/Disapproval by Others, as obstacles impeding their career success were more uncertain regarding their career choices. Thus, they were uncommitted to the careers they chose.

No significant correlation was found between TTFS and the career barriers scales for the total group. However, a consistent pattern of low, negative correlations between TTFS and career barriers scale was discovered for the total group (r=-.15) as well as for freshmen (r=-.11) and seniors (r=-.19) since there was no real differences between freshmen's and seniors' perceptions of career barriers. Women, who were not likely to perceive Self-Concept, Role conflict, Discrimination, and Disapproval/ discouragement by others as career barriers, scored high on TTFS which meant they tended to foreclose career options. Thus, they were uncommitted to their career choices.

Table 7
Correlations of Perceptions of Career Barriers with TTFS and VECS

	TTFS	VECS
Self-concept		
Total	-.14	.32**
Freshmen	-.13	.28**
Seniors	-.16	.36**
Role Conflict		
Total	-.13	.29**
Freshmen	-.09	.29*
Seniors	-.17	.29*
Discrimination		
Total	-.16	.20*
Freshmen	-.07	.22
Seniors	-.23*	.19
Discouragement/Disapproveal by Others		
Total	-.10	.30**
Freshmen	-.08	.15
Seniors	-.07	.19
Total Barriers		
Total	-.15	.30**
Freshmen	-.11	.29*
Seniors	-.19	.30**

* p<.05, ** p<.01

Unique Contributors to Career Commitment

The last research question focused on identifying the unique variables to explain individual differences in the prediction of career commitment. Eight independent variables were expected to be associated with the two dimensions of career commitment included: one measure of age, (1) academic classification; two indicators of family socioeconomic status (2) father's socioeconomic status and (3) mother's socioeconomic status; one indicator of employment stability, (4) the length of mother's employment outside home; one measure of academic achievement, (5) ACT composite scores; (6) a measure of gender traditionality of academic major; (7) a behavioral measure of stability of plans as frequency of changing major: number of changes; and a projection of future plan (8) preferred future career pattern including single and career, marriage and career, combination of marriage, career, and children, and others.

Due to some missing data, the number with completed data was smaller than the total sample, N=142. Some variables were intercorrelated; the correlation matrix is presented in Table 8. Preferred Future Career Pattern was recorded as three dummy variables because it was a categorical variable. Thus, a multiple R was computed instead of a bivariate r. Intercorrelations were low to moderate, ranging from .00 to .34. As can be seen from the correlation matrix, the strongest positive correlations were between: (1) Preferred Future Career Pattern and Length of Mother's Employment, $R=.34$, $F(3, 138)=5.87$, $p<.001$; and (2) Preferred Future Career Pattern and Traditionality of Academic Major, $R=.29$, $F(3, 138)= 4.24$, $p<.01$.

Other statistically significant positive correlations included the association between Mother's Socioeconomic Status and Father's Socioeconomic Status, $r=.26$, $p<.01$; the association between Mother's Socioeconomic Status and Length of Mother's Employment, $r=.26$, $p<.01$; and the association between Academic Classification and Frequency of Changing Major, $r=.22$, $p<.01$.

Table 8
Intercorrelations among Selected Variables

	1	2	3	4	5	6	7	8
1.Academic Classification	1.00							
2.Father's Socioeconomic Status	.10	1.00						
3.Mother's Socioeconomic Status	.09	.26**	1.00					
4.Length of Mother's Employment	.12	-.13	.26**	1.00				
5.Academic Achievement	.04	.13	.04	.05	1.00			
6.Traditionality of Academic Major	-.02	-.02	-.07	-.07	.15	1.00		
7.Frequency of Changing Major	.22**	.06	-.05	.02	.10	-.00	1.00	
8.Preferred Future Career Pattern[a]	.12	.21	.10	.34**	.09	.29**	.18	1.00

** $p<.01$

[a] The intercorrelations are based on multiple R.

A summary of the unique contribution of each of the variables described above is reported in Table 9. These values were obtained by comparing the R^2-value obtained from a regression equation including all variables with the R^2-values obtained from regression equations with the given value reviewed. The major purposes of this research question were two-fold: first, to identify the contribution of each variable by itself (alone) which is square of the bivariate correlation. For Preferred Future Career Pattern, this value represents a multiple correlation between the career patterns and the dependent variables. Second, to identify the unique contribution of each variable after controlling for the variance accounted for by a linear combination of the other variables.

Except variable eight, Preferred Future Career Pattern, Pearson's correlation coefficient was applied to find the simple correlation between each variable and career commitment. Three variables were significantly associated with TTFS by themselves. Academic classification was related negatively to TTFS ($r=-.22$, $p<.01$). College women who were in the lower academic classification (freshmen in this study) had a higher score on TTFS.

Table 9
Contribution of Selected Variables to Career Commitment

Variable List	Simple Correlation TTFS	Simple Correlation VECS	R^2 Increment[a] TTFS	R^2 Increment[a] VECS
Academic Classification	-.22**	-.10	.03*	.03*
Socioeconomic Status			.03	.02
Father's SES	-.04	.13		
Mother's SES	-.13	.03		
Length of Mother's Employment	-.18*	.06		
Academic Achievement	-.07	.01	.01	.00
Traditionality of Major	.18*	-.06	.04*	.00
Frequency of Changing Major	-.14	.10	.01	.01
Preferred Future Career Pattern	.23[b]	.19[b]	.03	.04*
Single + Career				
Marriage + Career				
Combination				
Others				

N = 142
* p<.05, ** p<.01
[a] A unique proportion of variations accounted for a variable given all other variables.
[b] The values are based on multiple regression, in which Preferred Future Career Pattern is recorded to be three dummy variables.

Length of mother's employment was also related negatively to TTFS (r=-.18, p<.05). College women whose mother had been employeed for a shorter time scored higher on TTFS. Gender traditionality of academic major was associated positively with TTFS, (r= .18, p<.05). College women who chose more non-traditional female academic majors had a higher score on TTFS. The other correlations were not significant.

Preferred Future Career Pattern is a categorical variable with four categories, therefore, it was recorded as three dummy variables. As indicated in Table 9, the multiple regression revealed significant relation between Preferred Future Career Pattern and VECS, R=.19, F(3, 143) = 2.79, p<.05.

In order to identify the unique contributors of selected variables to career commitment, a full model was established with all variables in the multiple regression. Each variable was taken out so that a reduced model was formed. Thus, R^2 increment of each variable was

computed and compared to the full model. The result was presented in Table 9. As shown, Academic Classification and Gender Traditionality of Academic Major provided unique contributions to TTFS. Academic Classification and Preferred Future Career Pattern provided unique contributions to VECS. Those four unique contributors all reached .05 significant level. However, Academic Classification added to make a unique contribution in the prediction of VECS only after the other variables were included in the equation.

CONCLUSION & SUGGESTION

CONCLUSION

Career Commitment and Ego Identity Status

Super (1957, 1980) and Crites (1974), believed that a strong relationship exists between age and career choice processes. Blustein, Ellis and Devenis (1989) found one dimension of career commitment, Vocational Exploration and Commitment (VEC), was significantly correlated with age. This study, however, found that the other dimension of career commitment, Tendency to Foreclose, was significantly correlated with academic classification. Why did not seniors score significantly higher than freshmen on VECS? It is assumed that a senior woman should be more certain than a freshman about who she is and what she wants to be after years of self examination and career exploration. The result of this study did not support the assumption. One of the common reasons could be that the more options one explores, the more confused one becomes. Other reasons may be related to the specific situation that a senior is facing. For example: the pressure of job-hunting, lacking information about market, or rejection of job interviews.

With regard to the ego identity statuses, Marcia's (1966) theory of four ego identity statuses is not supported through this study. Because there were no differences between freshmen and seniors in identifying their ego identity statuses, Marcia's classification might need more research to validate. Marcia assumed that seniors should belong to either Identity Achievement status or Moratorium status and freshmen should belong to either Foreclosure status or Identity Diffusion status. This study, however, did not find any categories defined by Marcia to identify college women's ego identity statuses.

Career Commitment and Perceptions of Career Barriers

The findings of this study supported the conclusion that perceptions of increased career barriers were positively related to the Vocational Exploration and Commitment Scale. College women who perceived career-related barriers as obstacles impeding their career success were more uncertain about their career choices, and thus, they were more hesitant to pursue their own career goals. Senior women, however, perceived discrimination as an obstacle that could impede their career success and were less likely to foreclose their career choices. Thus, they were more committed to the careers they chose. The process of recognizing the existence of discrimination toward coping with it played an important role for those senior women. It would be worthwhile to research more in the future about the process they had gone through and how they cope with the specific career barrier of discrimination.

Unique Contributors to Career Commitment

This study found that Academic Classification had unique contribution to TTFS. Senior women were more open to exploring careers than were freshmen women. The Academic Classification added to VECS significantly only after the other variables were included in the equation. Perry's (1970) developmental sequence of "personal epistemology" described nine steps that move a student from a simplistic, categorical view of knowledge to a more complex, pluralistic view in which knowledge and truth colud no longer be equated. According to perry, freshmen are in the Dualism stage where the knowledge of the world is either right or wrong, good or bad. Applied to interpersonal relationship/dating, a freshman woman believes that there exists only one right man for her. Smilarly, applied to the world of work, a freshman woman may believe that there exists only one or very few jobs suitable for her. For these students, answers exist; their task is to find and master them. They are minimally involved in exploring, or even not in exploring, occupational alternatives. Therefore, they are uncertain about the careers they are going to choose. Meanwhile, they tend to foreclose other choices related to occupational options at a young age.

In addition to Academic Classification, Gender Traditionality of Academic Major was found to be the other contributor to TTFS. A college women who chose a more traditional

female major were more open to other career choices. This finding differs from other studies.

In this study, however, women who chose non-traditional majors tended to foreclose their career choices. Thus, they were more uncommitted to chosen careers than the "traditionalists" were. Why? Several possible reasons include: 1) Work role identity - they are the "minority" in workplace, 2) Role model - the role model from her work environment is not that available, or there is no accessible role model with which to identify, and 3) Job satisfaction - lacking of a supportive environment leads to their dissatisfaction. This is another rich topic for research in the future.

Ruggiero and Wetson (1988) found the area of lifestyle and family choices (background differences, such as marital status, delayed marriage, presence of children; perceived conflict between marriage/relationship and a career or between children and a career) and the area of work itself (occupation/income, work context, and job satisfaction) played the determining roles in deciding women's work involvement. The result of the current study addresses the preference of future career pattern, which has a unique contribution to VECS. This is similar to Ruggiero and Wetson's findings in the area of lifestyle and family choices. Thus it may be inferred that preference for different lifestyles has impact on women's career commitment.

SUGGESTION

It was found from this study that women in Identity Achievement status had a strong tendency to foreclose their career options. Student development professionals could challenge them in terms of irrational beliefs. This assistance would help college women make progress from an uncommitted exploration phase to a highly committed phase with regard to career development. A course, such as "Making an Educational/Vocational Choice" offered by the Division of Counselor Education at The University of Iowa, is one of the applicable programs. This course encourages college women to explore themselves fully and to attempt to achieve their ego identity through various exploration activities.

The relationship between career commitment and career barriers implies that women who perceive career barriers as obstacles impeding their career success, are more uncommit-

ted to their carrer choices. According to Fassinger's (1990) multidimensional model of career barriers includes: background characteristics (e.g., previous work experience and academic success), psychological variables (e.g., role model influence and perceived encouragement). Career development professionals can start offering assistance by being role models and encouraging college women to be aware of more than the existing career barriers. College women can be, furthermore, encouraged to overcome those barriers. For example, professionals can assist college women in clarifying their own self-concept with certainty, directing them in building accurate work attitudes and encouraging them in coping with external barriers. Thus college women's perceptions of career barriers can be moved from "hindering my career success" toward "not hindering my career success". This study did not include every single career barrier Fassinger proposed, especially the environmental influences. It initiated, however, an accurate beginning point in studying the association between perceptions of career barriers and career commitment.

Even though today's female students may be encouraged to pursue more non-traditional female majors, college women who choose more traditional female majors also deserve encouragement to develop their potentialities to extremes in pursuing career success. Contrary to Farmer's (1985) and Stein and Bailey's (1970) conclusions, this study found that women who chose more traditional female majors had more committed to their choices than had women who chose more non-traditional female majors. Therefore, career counselors should not judge college women's career commitment by their choices of traditional female majors.

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美國大學女生生涯承諾與其自我認同關係之研究

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摘 要

本研究以美國愛荷華大學(The University of Iowa City IA)的147名大一和大四女生爲對象，探討她們的生涯承諾、自我認同、及選定的背景因素間關係。依變項乃以「生涯選擇承諾量表」中的二向度－「封閉性傾向」及「職業探索與承諾」爲主，「自我認同定位」及「對生涯障礙之看法」爲輔：而自變項包括有：年級、就讀科系、轉系次數、學業成績、家庭社經地位、母親工作年限、及對未來生涯型庇之期盼。研究結果顯示：

1. 大一女生較大四女生有明顯的封性傾向，意即在選擇職業的發展過程中，大一認爲她們沒有太多選擇，或認定只有少數幾種職業是適合她們的。
2. 大一與大四在自我認同定位上並無顯著不同。
3. 認定生涯障礙會阻撓其成功事業者對生涯選擇有顯著的不確定性。
4. 對生涯承諾具獨特貢獻的自變項計有三項：對未來生涯型態之期盼，就讀科系，及年級。

研究者根據研究結果，就大學女生的生涯輔導及未來研究兩方面，提出具體建議，包括研究者目前在成功大學所開的〝生涯規劃〞課，盼能進一步落實生涯規劃理念，做爲大學生適才適所，發揮專長，開創未來的途徑。

關鍵詞：大學女生、生涯承諾、自我認同、生涯障礙、生活方式