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ABSTRACT

Research on the values of women in traditional and nontraditional careers has produced differential results. To compare the home, career and leisure value orientations of college students in high-tech majors, 100 male and 100 female freshmen enrolled in science and engineering majors completed Super's Work Salience Inventory (1983). Results of discriminant, functional, and correlational analyses showed that the female participants scored higher on the career related value scales (task completion, job involvement, meaning from work, and career importance) and the leisure importance scale. They also evidenced more conflict between home and career values. Male students scored as high as female students on the home value scale when their meaning from work scale was not extremely high. Both sexes were equivalent on the importance of economic support and job specificity. Finally, occupational status of the mother was influential for female students but not for males. (MCF)

A Comparison of Male and Female High-Tech Students on Career, Home, and Leisure Values

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Abstract

Recent studies have focused on the effects of career, home, and leisure value orientations on the career development patterns of women. It appears the women experience a more complex set of career decisions than men, which is affected by greater role ambiguity and strong social pressures. Specifically, females who highly value 'traditional' activities such as family and home seldom select careers dominated by males. Other studies have found that females in non-traditional fields value stereotypic feminine characteristics more highly than males in the same area. However, little is known about the importance of leisure values for women in non-traditional fields. This study utilized discriminant, correlational, and analysis of variance techniques to examine the similarities and differences between male and female freshmen in high tech majors on career, home, and leisure value orientations. The female participants scored higher on the career and leisure scales. They also evidenced more conflict between home and career values. The male students scored as high as female students on the home value scale when their meaning from work scale was not extremely high. Both sexes were equivalent on the importance of economic support and job specificity. Implications for future research were included in the discussion.

A Comparison of Male and Female High-Tech Students on Career, Home, and Leisure Values

Women entering non-traditional careers have received a great deal of research attention in the past few years. Several early studies focused upon the differences between women in traditional career fields, women in non-traditional fields, and homemakers. A variety of other studies have focused upon the home-career conflict experienced by professional women. In a review of the past two decades of research, Yogev (1983) concluded that the findings of the 1960's that professional women lack feminity and have more psychological maladjustment than homemakers was caused by the prevailing social view and inadequate methodology. She presented a convincing contemporary view that women can combine career with family without psychological conflicts or personality disturbances. Yet at the present time there are many unknowns about the career development pattern of women, particularly those entering non-traditional fields.

Several recent studies have focused on the effects of career and home value orientations on the differential career development patterns of high school youth. Farmer (1983) found that high school freshmen and senior females scored higher on both career commitment and homemaking commitment than their male counterparts. Slightly more males than females endorsed a plan to share parenting and career roles with their future spouses. Tittle (1981) also found that 75% of the adolescent males surveyed indicated that they would share parenting equally with their future spouses in addition to being employed. Girls endorsed significantly less a statement about sharing financial responsibility equally with their future spouses. Peng and Jaffe (1979) completed a longitudinal study of a high school class about five years after graduation and found that women in

traditionally male dominated fields had higher scores on a work scale and lower scores on the community and family scales than women in other fields. The relationship of work goals to men's choice of traditional male fields was similar. The authors interpreted this strong relationship between work orientation and choice of male-dominated career goals as consistent with the greater prestige and financial reward associated with these jobs.

Other studies have focused more specifically upon the career and personal value orientations of women in engineering and science. Greenfield, Holloway, and Remus (1982) found that female freshman engineering students viewed the engineering environment as more personal, had greater interests in some of the more people-oriented fields of engineering, and felt that the opportunity to help others was more important to achieve career satisfaction in the engineering profession than their male counterparts. Plas and Wallston (1983) found that women college students in science-oriented fields valued those personal characteristics they stereotypically associated with females more than those associated with males. The authors concluded that these women are not denying their feminine traits even though they are pursuing careers traditionally dominated by males.

There is little data on the leisure values of college students, espcially those in engineering and science-oriented curriculum. Bachman and Johnston (1979) found that college freshmen are strongly oriented toward work and career, as well as toward leisure and family. On the other hand, Weiner and Hunt (1983) found that students in general possessed a stronger leisure orientation than work orientation. Undecided majors possessed a significantly lower work orientation than business, engineering, and agriculture majors. These authors concluded that the higher leisure orientation over work orientation may be reflective of changing work-leisure values in

our society. With a less promising job market, psychological satisfactions must be sought through avenues other than work.

Additional studies have focused on the differences in family background between males and females entering engineering and science fields. These investigations have indicated the importance of support from significant others and same sex role models for career motivation in women, especially those in non-traditional careers. (Edye, 1970; Farmer, 1980; Stein & Bailey, 1973; Tangri, 1972).

The purpose of the present study was to attempt to replicate some of these findings, with the inclusion of leisure value orientation, on freshman women and men enrolled in engineering and technical science majors. The specific research hypothesis generated by the previous studies were as follows:

1) That female high-tech students would score higher on career-related values than their male counterparts.
2) That female and male students in these fields would score equivallently on importance of home and family
3) That female high-tech students would evidence greater home-career conflict than the males
4) That role-modeling of the mother's occupation would be more important for the females in the study

Method

Participants: The study utilized 100 female and 100 male freshmen who were randomly selected from all students enrolling in science and engineering majors through the summer orientation program at a midwestern university. The participants were primarily from middle and upper socioeconomic backgrounds with most of their fathers employed in white collar, professional, and skilled jobs. About one third of the students' mothers were homemakers. Only a small percentage of the employed mothers held managerial or professional positions.

One exception to this trend was a sizeable difference between the number of women students' professional mothers (24) and the number of male students' professional mothers (15). This difference will be further covered in the results and discussions sections.

Instruments: The student participants completed Super's Work Salience Inventory (1983) prior to their taking the mathematics, trigonometry, and English placement tests on the first day of a two-day program. The Work Salience Inventory (WSI) consists of 84 items which are self-rated on a 5-point Likert Scale. The instrument yields scores on values of task completion, job involvement, occupational specificity, meaning from work, economic support, leisure importance, career importance, and importance of home and family.

Analysis: A combination of discriminant, correlation, and analysis of variance (ANOVA) techniques were employed to investigate the similarities and differences in the value orientation patterns of the male and female high-tech students. The hypotheses testing gender of the student by occupational level of each parent were conducted by chi-square analyses.

Results

The first research hypothesis predicted that female high-tech students would score higher on career related values than their male counter parts. To test for differences in these values, as measured by the WSI, a discriminant analysis of work, home, and leisure values by sex was conducted. The results were significant (χ^2=20.06, D.F. = 8, $p < .01$). Further analysis by Univariate F and t-tests show that five of the eight study variables contributed to this difference. Specifically, the female high-tech students scored higher on the values of task completion, job involvement, meaning from

work, career importance and leisure importance. The values which did not differ between the sexes were occupational specificity, importance of additional income from work, and value toward home and family. The latter provided support for the second research hypothesis (female and male students would score equivalently on importance of home and family). The means, standard deviations, and mean ranks (scale total/number of items) for the male and female students are presented in Table 1.

Insert Table 1 about here

The third research hypothesis predicted that women with high value orientations toward home and family would evidence greater home-career conflict than the males. Pearson correlation coefficients were generated from each sex on the study variables. These are presented in Table 2.

Insert Table 2 about here

Two particular pattern differences were noted. First, the females evidenced a moderate, negative correlation between home and career values ($r = -.27$, $p < .01$), while the males did not ($r = -.07$, n.s.). Secondly, males associated personal meaning from work positively with economic support and career motivation ($r = .17$, $p < .05$ and $r = .42$, $p < .01$, respectively) and negatively with leisure value and importance of home and family ($r = -.23$, $p < .01$ and $r = -.29$, $p < .01$, respectively). The female students associated meaning from work only with career motivation ($r = .43$, $p < .01$). These will be discussed further in the next section.

Finally, a chi-square analysis of occupational level of the parents by gender of the student did show a significant interaction trend with the moth-

ers of the female students more likely being professionals (Tau C = .14, $p < .05$). This supports the fourth research hypothesis that role-modeling of the mother's occupation would be more important for the females in the study. In all other respects, the male and female students had very similar socioeconomic and parental occupational backgrounds.

Discussion

The results of this study supported the research hypotheses that female high-tech students would score higher than males on career related values. Specifically, they gave higher ratings to the importance of task completion, job involvement, meaning from work, and career importance. These findings correspond with those of Peng and Jaffe (1976), and Farmer (1983), and may indicate a social change where women are perceiving a career as central to their adult roles more than in the past. Female high-tech students may require a greater salience of work-oriented values to choose a non-traditional career. It may also reflect that the women students in the study were highly oriented towards a professional career for personal actualization which is further supported by their higher values on leisure activities. The lack of differences on economic importance and job specificity is consistent with the contention of Peng and Jaffe (1979), that the greater prestige and financial reward associated with these professions is equal for both sexes and is related to choice of career in these fields.

In the present study, there was no difference between the male and female students on the importance of home and family. This supports Peng and Jaffe's findings (1979), but contrasts with research by Farmer (1983) which reported greater importance on this value by females who fantasized about entering non-traditional careers. This might be a reflection of the fact that high school girls are not yet realistically facing choices of marriage

and career. However, this investigation did find a strong, negative correlation between home/family versus career values among the female students, but not among the males. So, while the males may be more ready to accept more responsibility for family responsibilities (e.g., Tittle, 1981) it is the female students who continue to evidence some interference of career motivation by their orientation toward home and family. This conflict often increases for professional women (Cooper & Robinson, 1983). Similarly, the study found that male students who scored high on personal meaning from work tended to have low values toward leisure and home activities. This fits with the beginning of a pattern of workaholism. Although the women were pursuing training in non-traditional fields and there is a rise in home focus for men, it still appears that both sexes in the study were influenced by the prevailing cultural norms.

The study also found an interaction of sex-modeling of the parent for the participants. Specifically, occupational status of the mother was influential on the female students, but not for the males. Future research studies should further explore this dimension and the importance of career-role modeling in general. In addition, process oriented studies, which investigate post-intervention changes in fantasy and tentative career choices of children and adolescents, would be particularly useful in providing information to facilitate society's movement toward greater occupational freedom for both sexes.

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Table 1

Means, Standard Deviations, and Ranks

of Male and Female Students on Study Values

	MALES			FEMALES			
	$\bar{x}$	SD	R	$\bar{x}$	SD	R	$\bar{x}$
Task Completion	61.1	6.4	4	63.3	6.3	4	.02*
Job Involvement	38.4	3.5	3	39.7	3.7	3	.02*
Occupational Specificity	24.5	3.7	8	24.4	3.1	8	.89
Work Meaning	23.5	2.9	6	24.8	3.1	5	.01*
Economic Support	26.1	3.6	7	25.9	3.0	7	.67
Leisure Importance	39.7	4.0	1	40.9	3.4	1	.03*
Career Importance	66.5	6.4	2	69.0	6.5	2	.01*
Home/Family Importance	28.0	4.3	5	28.2	5.8	6	.76

Table 2

Inter-Scale Correlations of Study Values for the Male and Females High-Tech Students

	Task Completion	Job Involvement	Occupational Specificity	Work Meaning	Economic Support	Leisure Importance	Career Importance	Home/Fam. Importance
Job Involvement	.50 p=.01					Males		
Occupational Specificity	.23 p=.01	.20 p=.02						
Work Meaning	.26 p=.01	.43 p=.01	.25 p=.01					
Economic Support	.03 p=.37	.17 p=.05	-.08 p=.21	.17 p=.05				
Leisure Importance	.10 p=.16	.01 p=.48	-.31 p=.01	-.23 p=.01	.16 p=.04			
Career Importance	.50 p=.01	.59 p=.01	.32 p=.01	.42 p=.01	.19 p=.03	.11 p=.13		
Home/Family Importance	.04 p=.33	-.17 p=.05	-.19 p=.03	-.29 p=.01	.12 p=.11	.41 p=.01	-.07 p=.25	
Job Involvement	.56 p=.01					Females		
Occupational Specificity	.18 p=.04	.11 p=.13						
Work Meaning	.38 p=.01	.47 p=.01	.18 p=.04					
Economic Support	-.02 p=.41	.12 p=.11	-.01 p=.48	.14 p=.10				
Leisure Importance	.00 p=.48	.07 p=.24	-.03 p=.38	.07 p=.24	.50 p=.31			
Career Importance	.68 p=.01	.61 p=.01	.32 p=.01	.43 p=.01	.21 p=.02	.03 p=.38		
ne/Family Importance	-.15 p=.07	-.18 p=.04	-.02 p=.41	-.14 p=.09	.48 p=.32	.10 p=.19	-.27 p=.01	