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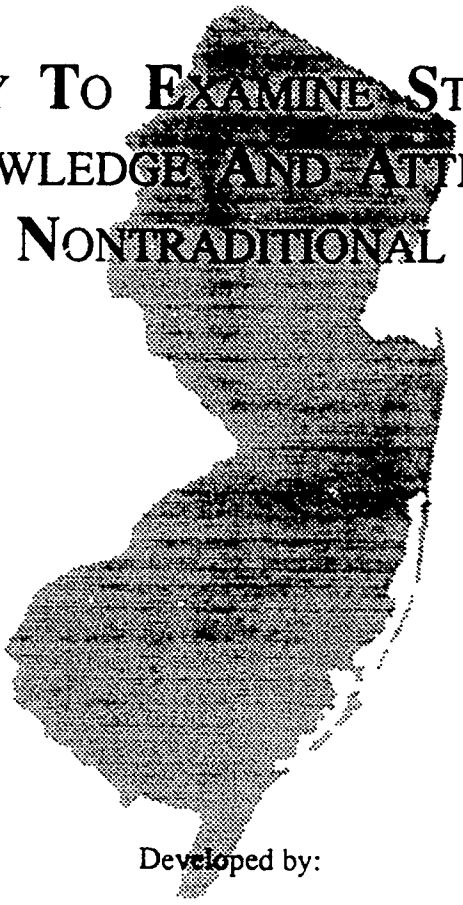
ABSTRACT

A study examined the relationship between knowledge of nontraditional careers and attitudes toward them. The questionnaire administered to 1,755 students from 13 New Jersey school districts was designed to identify the relationship among knowledge of nontraditional careers, attitudes toward females in nontraditional careers, and the following demographic variables: gender, age, race, family income, school type, marital status, parental status, career option, mother's occupation, and father's occupation. Males and females expressed similar attitudes toward nontraditional careers until the age of 16 years, after which males expressed significantly more traditional attitudes than females did. Parents' educational level was also significantly related to attitude toward females in nontraditional careers. Students with parents in professional or self-employed positions were most likely to have positive attitudes about females in nontraditional careers. Most students had moderate to moderately high levels of knowledge about nontraditional careers. Level of knowledge increased with age. Male attitudes regarding females in nontraditional careers became more positive as their level of knowledge about the type of training and salaries associated with nontraditional careers increased, thus confirming the importance of gender equity programs. (The survey questionnaire is included. Contains 11 references.) (MN)

STUDY TO EXAMINE STUDENT KNOWLEDGE AND ATTITUDE TOWARD NONTRADITIONAL CAREERS



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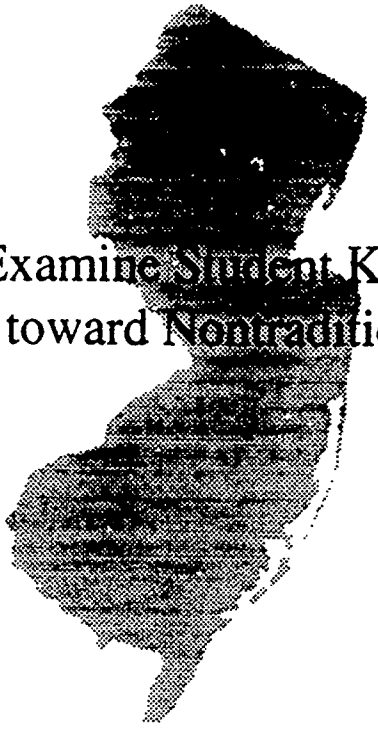

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Introduction

During the 1991-92 academic year the New Jersey Department of Education sponsored a study to examine the knowledge and attitude of students toward nontraditional careers. A study was conducted by the Life Skills Center of Montclair State College to measure the knowledge and attitude of students and to examine these variables as related to selected demographic characteristics. Lack of knowledge and poor perception of nontraditional careers is thought to prevent female students from entering careers which may be satisfying and financial rewarding to them. The purpose of the study was to examine the knowledge and attitude toward nontraditional careers of 7th, 8th, and 9th grade students.

REVIEW OF LITERATURE

A review of the literature on knowledge and attitudes toward nontraditional careers indicates that both male and females tend to hold a non-positive attitude toward women in nontraditional roles for a variety of reasons. In addition to a somewhat negative general attitude, students have been found to be low in their level of knowledge about nontraditional career options. The purpose of this study was to examine demographic characteristics which tend to be associated with attitude toward nontraditional careers. Through increased understanding of the correlates of a positive or negative attitude, researchers are hopeful that progress can be achieved in increasing acceptance of a wider variety of careers. In general, careers which have been considered to be masculine have paid higher salaries and been considered to be of higher status than those traditionally held by women. In order for women to experience the rewards of a career both financially and socio-psychologically, women need to engage in a wider variety of career opportunities.

Attitudes toward Nontraditional Careers

Although careers which have traditionally been thought of as male careers are better paying and of higher status than typical female careers, females have been reluctant to pursue these types of careers because of the negative sanctions of society. Women who are engaged in masculine occupations have been described as the least desirable heterosexual romantic partners (Condry and Dyer, 1976; Pfost and Fiore, 1990). Not only were these women sanctioned in their romantic relationships, research has indicated that females pursuing masculine occupations were least often chosen by other women as same-gender friends (Hagen and Kahn, 1975; Pfost and Fiore, 1990).

The negative sanctions associated with pursuit of a nontraditional career have been reported as more stringent for females than for males. Women are more likely to suffer negative interpersonal consequences as a result of choosing a nontraditional career. Males have been found to experience less social isolation as a result of pursing deviant career goals and thus experience more latitude in their career choices than females. Negative interpersonal consequences may prompt both males and females to continue in traditional career patterns rather than pursuing careers which provide opportunities for growth and fulfillment (Pfost and Fiore, 1990).

In addition to the negative social reactions experienced as a result of nontraditional career choices, some researchers have suggested that females are inhibited by a fear of success which is not experienced by men. The ideal female role is established in early childhood (Horner, 1968). As children learn about appropriate role behavior, they limit their image of possible career paths to be compatible with their newly acquired gender norms (Hannah and Kahn, 1989).

Hannah and Kahn (1989) examined several demographic factors as related to occupational choices for students. They found that as children become aware of the social status related to occupational choices they are most likely to choose a career which is equivalent in prestige level to their own background. Children from 5 to 13 years of age were found to be more gender stereotyped in their job choices than older students. Girls were found to be less rigid in their choices than boys. The education of the respondents father was found to be related to attitude toward nontraditional careers for females. Females in male dominated careers were more likely to have more highly educated fathers than females in traditional careers. Girls with less educated fathers were found to be more likely to choose female-dominated occupations. In terms of status, male-dominated occupations were more likely to be rated as better, or higher in status, than female dominated occupations (Teglasi, 1981). Lueptow (1981) found that job choices were more likely to be gender segregated at the low prestige level than at higher prestige levels.

The combined effect of the anticipated negative consequences in interpersonal relationships and the role expectations learned in early childhood have combined to make selection of a nontraditional career choice difficult for females. Although there has been a major social movement to encourage females to broaden their career choices, there has been little impetus for males to consider anything except male-dominated occupations (Hannah and Kahn, 1989). Consequently, attitudes toward careers tend to remain stable with female roles warranting less prestige and lower salaries than male roles. These attitudes have been difficult to change as they are the outcome of life-long socialization.

Knowledge about Nontraditional Careers

Little research has been conducted on the knowledge of students about nontraditional careers. Yanico and Hardin (1986) reviewed five years of vocational research literature and found fewer than one percent of 522 studies to be involved with awareness of occupations. A general lack of knowledge about careers in science and technology was reported by McLure and Piel (1978) when they studied 1000 talented high school female students. The research stated that lack of information may be a deterrent to women considering preparation for nontraditional careers.

Male and female students were found to be similar in their level of occupational knowledge. However, Yanico and Hardin (1986) report that participants thought it a violation of their sex-role norms to admit that they know as much about nontraditional roles and traditional ones. No relationship was found by Yanico and Hardin (1986) between actual level of knowledge and attitudes toward nontraditional roles. However, male students were found to be significantly more stereotyped in their perceptions than female students.

Level of knowledge about nontraditional careers has generally not been found to be related to attitude toward the career. Researchers have found a general lack of career knowledge. Males tend to be more stereotyped in their attitudes than female respondents. Because of the social movement to increase acceptance of females in nontraditional careers, some researchers have suggested that participants may be responding in the manner which they perceive to be socially acceptable rather than reflecting their actual attitudes (Yanico and Hardin, 1986).

METHOD OF STUDY

A study was conducted to examine the level of student knowledge and attitude about nontraditional careers and selected demographic characteristics. Lack of knowledge and poor attitude about nontraditional careers has been considered to be a deterrent to women entering nontraditional career options. The specific question to be answered by this study was what is the level of knowledge of students in the 7th, 8th, and 9th grade about nontraditional careers; what are their attitudes toward these careers; and how are these variables related to demographic characteristics? A survey was

used to collect the data. Coordinators of gender equity training programs throughout the state were asked to supervise the administration of the survey instrument to students.

Population and Sample

The sample consisted of 1755 students in eight school districts located throughout the state. A quota sampling technique was used in an attempt to include 1000 students at the 7th, 8th, and 10th grade levels. Because data was collected in classroom situations, additional students in other grade levels were included. All students present at the time that the data was collected were asked to participate. Although most of the students were in the 7th, 8th, and 9th grades, the final sample included students from 12 years to those who were more than twenty years old.

Data Collection

The data collection instrument consisted of a test which asked the student to indicate the best type of training which would be required for twelve different occupations. The job titles selected were the ones which previous research had indicated to have the best outlook in the Status Report of Female Completers in New Jersey Vocational Education (1990). Another section of the knowledge measurement instrument asked the participant to indicate the highest salary for selected jobs. The correct answer was determined by the American Salaries and Wages Survey (1988/90). The student's knowledge score was the percent answered correctly on the knowledge section of the survey.

The objective of the second section of the survey was to examine the student's attitude toward nontraditional careers. The students were asked to consider each of 24 items on a five point Likert-type scale to indicate their feelings of agreement with the following indicators: strongly agree, agree, neutral, disagree, strongly disagree. This portion of the survey was designed to identify attitudes toward a nontraditional careers inventory provided by the New Jersey State Department of Vocational Education. The survey was administered by gender-project administrators to students in classroom situations and took approximately 15 minutes to complete. Reliability Correlation Coefficients were performed on the results of the attitude and knowledge portions of the instrument. A split half reliability test on the attitude questions indicated a R value of .9972 for 21 questions. The knowledge portion of the test indicated a split half reliability of .9999 for 24 questions.

Method of Data Analysis

Data were examined by means of frequency and percentage distributions. Level of knowledge of nontraditional careers was measured as the correct number of responses on 24 questions asking the best type of training and the relative income level for a variety of positions. Relationships between knowledge and attitude and demographic characteristics were measured with AVONA.

FINDINGS

During the 1991-92 academic year, 1755 student in thirteen school districts throughout New Jersey participated in the study. The participant group included students in the seventh through twelfth grades. Although the target population was seventh through ninth graders, students in all grades were included because the data was collected in classroom situations where a wide variety of grade level students were present.

The results of the analysis of the findings are presented in three parts: (1) demographic information; (2) test variables; and (3) relationships between the test variables, attitude and knowledge toward nontraditional careers, and demographic characteristics. Demographic data is presented in Table I showing the frequency and percentage of the sample for each characteristic. The relationships between knowledge, attitude, and deomgraphic characteristics were examined with analysis of variance and illustrated with line graphs. The test variables, attitude and

knowledge, are shown in Tables 2 and 3. Findings at the .05 level were accepted as significant relationships and those at the .01 level as highly significant.

Demographic Information

Each subject was asked to complete a questionnaire requesting demographic information. The purpose of collecting this data was to examine how these factors might be related to attitudes and knowledge about nontraditional careers.

The sample consisted of 50 percent male, 655 students, and 50 percent female, 647 students. They ranged in age from students who were twelve to those who were over 20 years. Although the target groups were students in middle schools, because the data was collected in classroom situations other grade levels were sometimes included. Seventy-nine percent, 1295 students, of the sample were in the twelve through fourteen years old age group. The majority of the sample, 24 percent, categorized themselves as African American. Caucasian and students who classified themselves as Other in terms of race/gender formed the second and third largest groups. The family income of the subjects participating in the study ranged from less than $21,000 to over $90,000 per year. The largest group, 18 percent, reported family incomes of less than $21,000 per year. See Table 1 for characteristics of the sample.

Table 1. Gender, age, racial, income, type of school, marital and parental status, career option, and parental occupation characteristics of sample. n=1755

	f	%
Gender		
male	655	50
female	647	50
Age		
12 yrs	374	23
13 yrs	454	28
14 yrs	467	28
15 yrs	171	10
16 yrs	82	5
17 yrs	43	3
18 yrs	22	1
19 yrs	6	0
>20 yrs	21	1
Race		
Caucasian	309	21
African American	350	24
Hispanic	251	17
Asian	132	9
Native American	80	6
Other	328	23
Income		
<$21,000	269	18
$21-30,000	209	14
$31-40,000	201	14
$41-50,000	243	16
$51-60,000		11
$61-70,000	110	7
$71-80,000	100	7
$81-90,000	26	2
>$90,000	155	10

	f	%
School Type:		
Comprehensive	600	36
Voc. Tech. School	288	18
Other	671	43
Marital Status		
single	1062	66
married	221	14
separated	78	5
divorced	42	3
widowed	30	2
other	168	10
Parental Status		
not	1167	76
parent	272	18
step	62	4
foster	35	2
Career Option		
traditional	807	63
nontraditional	475	37
Mother's Occupation		
professional	385	29
managerial	159	12
self-employed	158	12
service	280	21
blue collar	92	7
homemaker	105	8
not employed	151	11
Father's Occupation		
professional	361	30
managerial	143	12
self-employed	151	12
service	247	20
blue collar	91	8
homemaker	83	7
not employed	134	11

Most of the students were enrolled in comprehensive schools, 38 percent, while 18 percent were in Vocational Technical Schools. The largest group of students, 43 percent, classified their school as other. In terms of marital and parental status, the majority of the students were single, 66 percent, and were not parents, 76 percent. Because very young participants classified themselves as divorced, widowed, and as step and foster parents, the researcher believes that the students were sometimes describing their family situation rather than their marital and parental situation. The majority, 63 percent, of the students were enrolled in traditional career options. Most of the student's mothers and fathers were involved in professional occupations, 29 and 30 percent respectively. The second largest group of students had parents involved in service occupations. See Table 1 for distribution of the sample by type of school, marital status, parental status, career option, and occupation of parents.

Test Variables

Attitude

Attitude toward nontraditional careers was measured by forty Likert-type questions on which the respondent indicated feelings of agreement to disagreement with the statement. The respondents indicated their attitude toward nontraditional careers by selecting the response category which most accurately described their feelings. The response categories ranged from strongly agree to strongly disagree to statements concerning various career situations. The instrument was scored from one to five with one indicating that the participant strongly agreed with the statement. The responses were summed in order to attain an attitude score. The scores were then divided into five groups with those exhibiting the lowest scores classed as the least positive attitude toward nontraditional roles and those with the highest scores as having the most positive attitude toward nontraditional careers.

The majority of the students, 61 percent, exhibited a moderately positive attitude toward nontraditional careers in that they somewhat agreed with the statements, while 28 percent were in the most positive group (strongly agreed with the statements). Four percent of the respondents indicated a moderately negative or negative attitude. See Table 2 for level of attitude toward nontraditional careers.

Table 2. Attitude toward nontraditional careers. n=1755.

Attitude Level	f	%
Negative	13	1
M.Negative	57	3
Moderate	132	8
M.Positive	1063	61
Positive	483	28

Knowledge

Knowledge of nontraditional careers was measured by a two part instrument which asks the respondent the type of training which would be required for a variety of male and female nontraditional occupations. An additional group of twelve questions measured the student's knowledge of the salary which was likely for a variety of positions. The participant was not required to know the actual wage of each position but its relative position in groups of positions. See Questionnaire. The participants were given a score based on the number of questions answered correctly. The scores were divided into five groups. The students with the highest scores, most correct answers, were classified as high in knowledge. Those with the lowest scores were classed as low in knowledge. The majority of the students were in the moderate to moderately high knowledge group. The average score was 9.31. This score indicates that the student answered 39 percent of the questions correctly. See Table 3 for the distribution of the participants according to level of knowledge.

Table 3. Knowledge of nontraditional careers. n=1755

Knowledge Level	f	%
Low	45	3
M.Low	229	13
Moderate	607	35
M.High	656	37
High	216	12

Relationships Between Variables

Knowledge and Attitude as Related to Demographic Characteristics

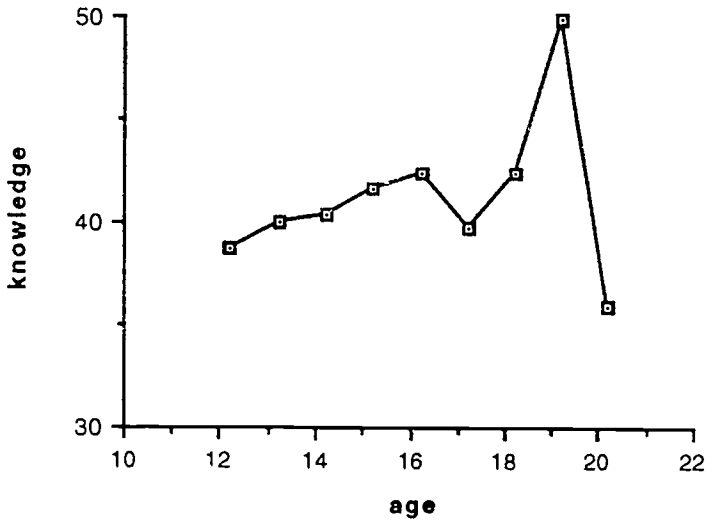
KNOWLEDGE

A series of analysis of variance tests were performed to examine the characteristics which were significantly related to knowledge level about nontraditional careers. The factors which were found to be significantly related to knowledge about nontraditional careers were age, type of school, parental status, marital status, race, mother's occupation, and father's occupation. No significant relationship was found between level of knowledge of nontraditional careers and gender, career choice, and income.

Knowledge and Age

Age was found to be positively related to knowledge level. As the student's age increased, the student became more knowledgeable until the age of nineteen (F=2.64, p.0074). The twelve year old students answered 38 percent of the questions correctly while nineteen year old students answered 49 percent correctly. The lowest levels of knowledge were exhibited by those students in the twenty year old group; 35 percent correct answers. See Figure 1 for the relationship between knowledge and age.

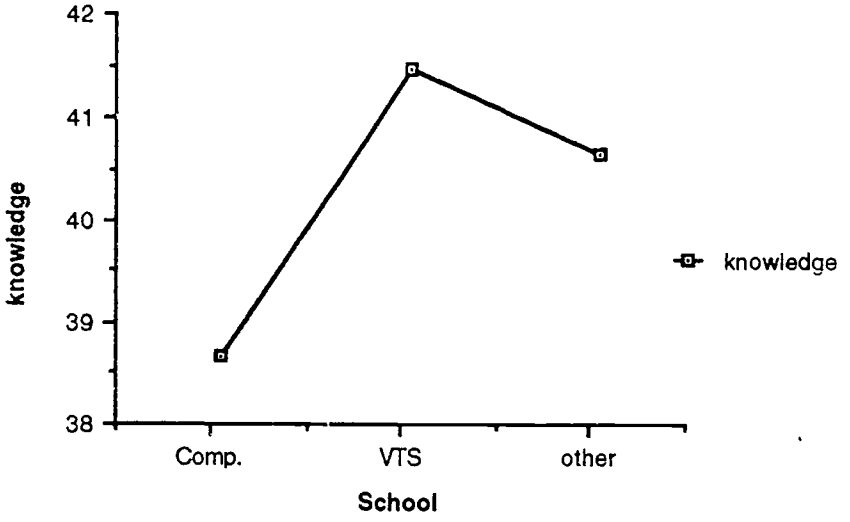
Figure 1. Knowledge about nontraditional careers as related to age.



Knowledge and Type of School

Students enrolled in Vocational Technical Schools were more knowledgeable (F=8.23, p.0003) about nontraditional careers than those in comprehensive schools. Students enrolled in Vocational Technical Schools answered 41 percent of the questions correctly while those in Comprehensive schools answered 39 percent correctly. See Figure 2 for the relationship between knowledge and type of school.

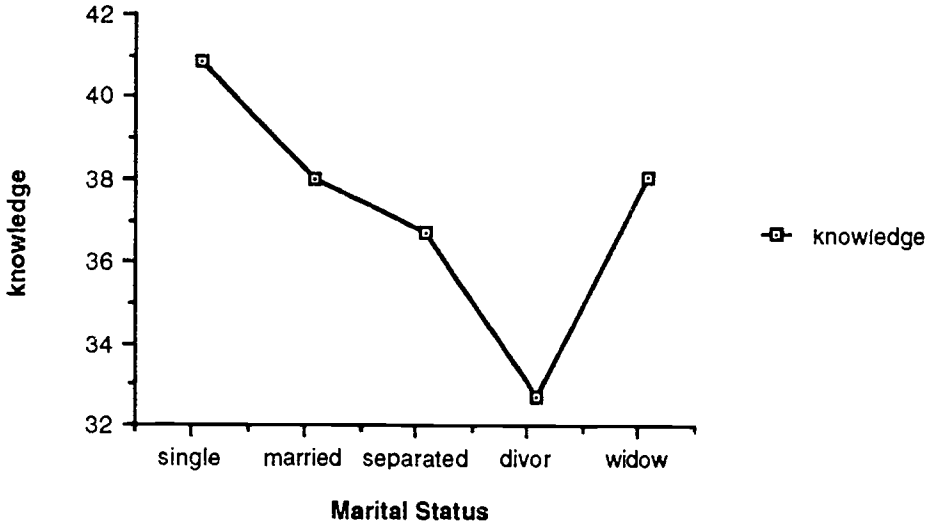
Figure 2. Knowledge as related to type of school.



Knowledge and Marital and Parental Status

Marital and parental status were also found to be significantly related to the student's knowledge. Students who were single (F=8.99, p.0001) were found to be the most knowledgeable while those who were divorced were the least knowledgeable. Single participants had an average score of 41 percent while those who were divorced exhibited scores of 32 percent. See Figure 3 for the relationship between knowledge and marital status.

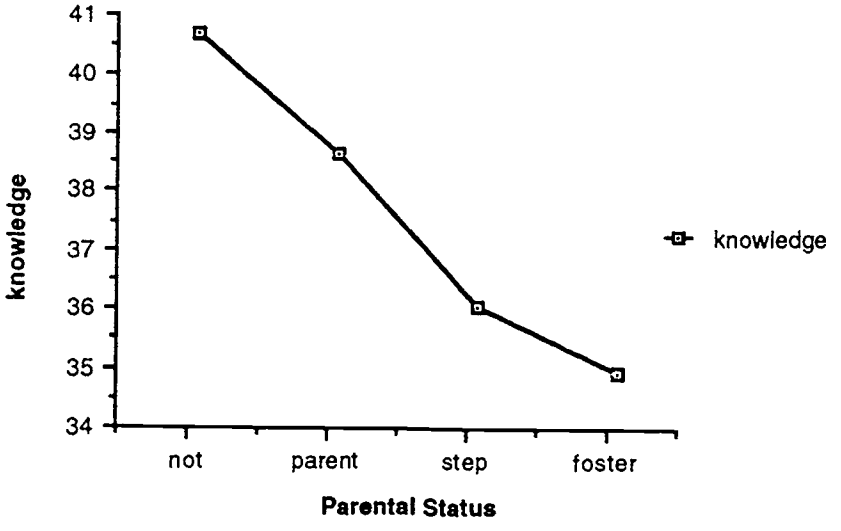
Figure 3. Knowledge as related to marital status.



Students who were not parents (F=8.19, p.0001) were found to be more knowledgeable than parents, step parents, or foster parents. Students who classified themselves as not parents

answered 41 percent of the questions correctly. See Figure 4 for the relationship between knowledge and parental status.

Figure 4. Knowledge as related to parental status.

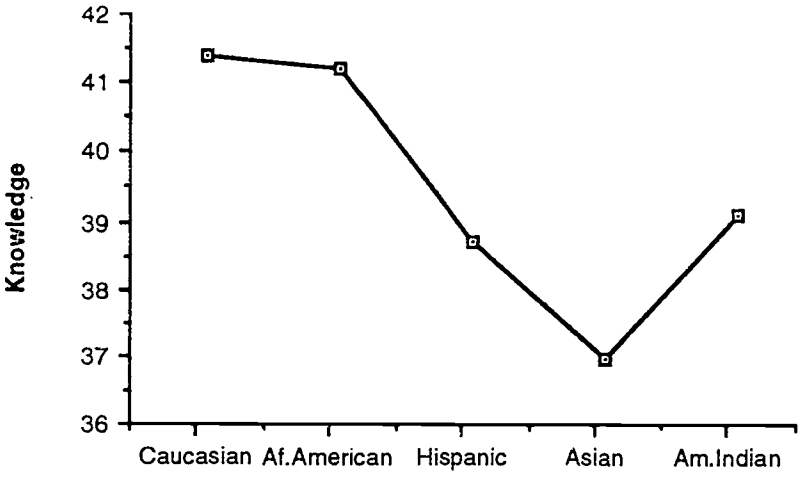


When all students who were classified as single parents (single, separated, and widowed respondents who were parents, step parents, or foster parents) were compared with respondents who were not parents no significant relationships were found in their knowledge about nontraditional careers (F=.606, p.4366). Students who classified themselves as single parents were sometimes very young. They may have been describing their family situation rather than their marital status.

Knowledge and Race/Ethnic Background

In terms of race those students who classed themselves as Caucasian or African Americans were found to be more knowledgeable than the other groups (F=5.03, p.0001). The lowest levels of knowledge about nontraditional careers was found among Asian students where 37 percent of the questions were answered correctly while Caucasian and African American students answered 41 percent correctly. See Figure 5 for the relationship between knowledge and race.

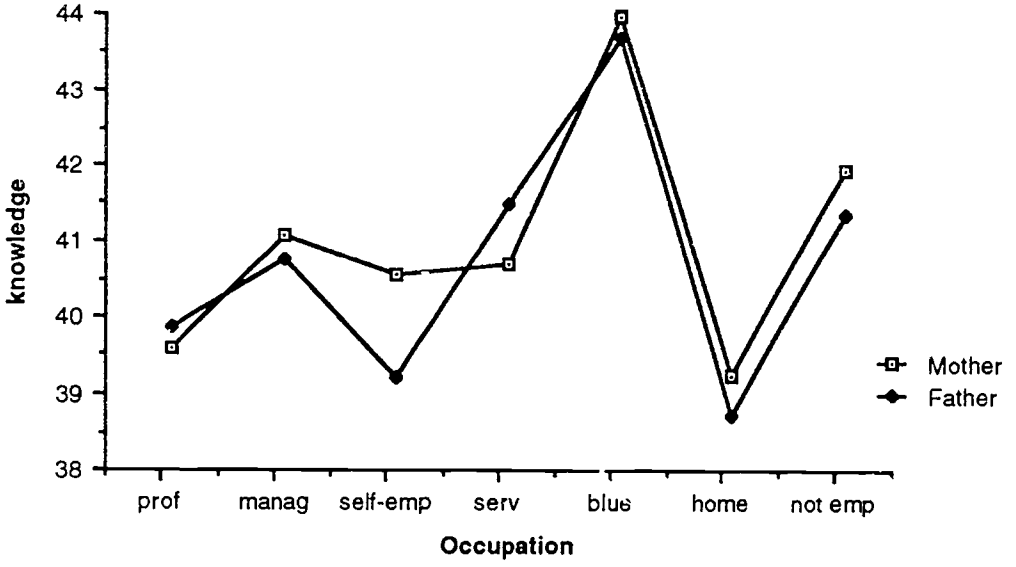
Figure 5. Knowledge as related to race.



Knowledge and Parent's Occupation

Students whose mothers were in blue collar positions had the highest knowledge scores (F=2.8, p.01). Having a father employed in a blue collar position was also significantly associated with a high knowledge level (F=2.76, p.01). The lowest levels of knowledge were exhibited by those whose mothers and fathers were homemakers, 39 percent correct responses, while those whose parents were in blue collar positions scored an average of 44 percent. See Figure 6 for the relationship between knowledge and parent's occupation.

Figure 6. Knowledge as related to parent's occupations.



ATTITUDE

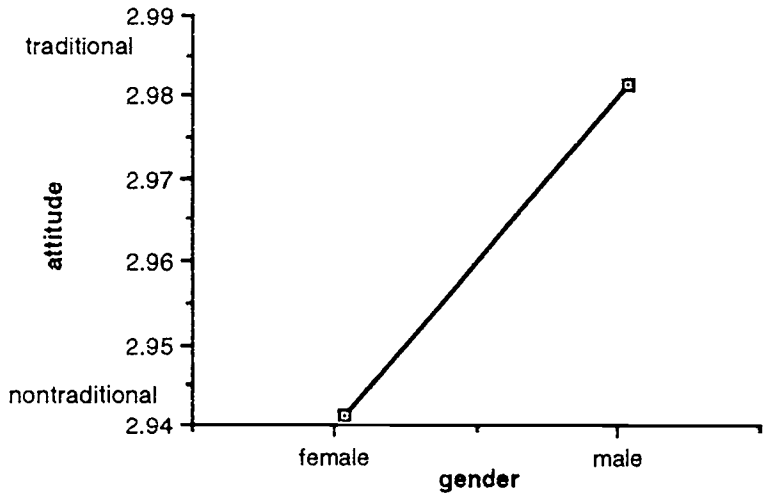
A series of analysis of variance tests were performed to examine the characteristics which were significantly related to attitude toward nontraditional careers. Attitude toward nontraditional occupations was found to be significantly related to gender, age, type of school, marital status,

career, race, income level, mother's occupation, and father's occupation. Parental status was not found to be significantly related to attitude.

Attitude and Gender

Male participants were significantly more likely (F=10.28, p.0014) to be traditional in their attitudes than female participants. This confirms the finding of Yanico and Hardin (1986) that males are more stereotyped in their perception than females. See Figure 7 for the relationship between attitude toward nontraditional careers and gender.

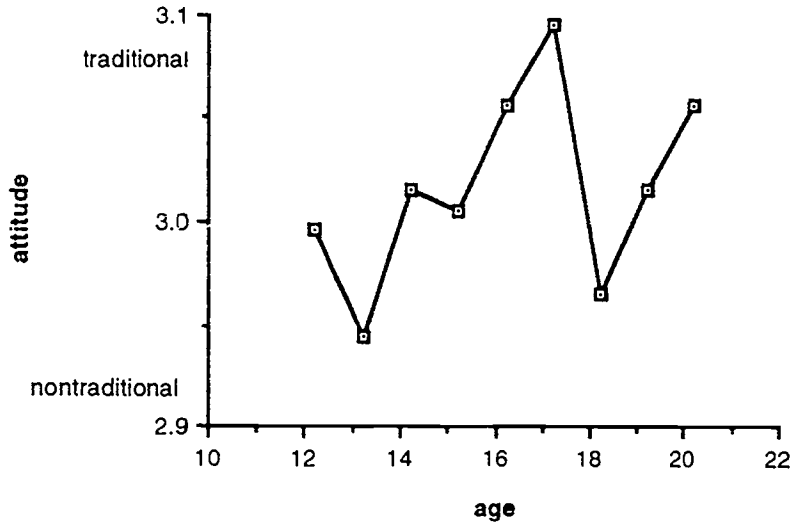
Figure 7. Attitude as related to gender.



Attitude and Age

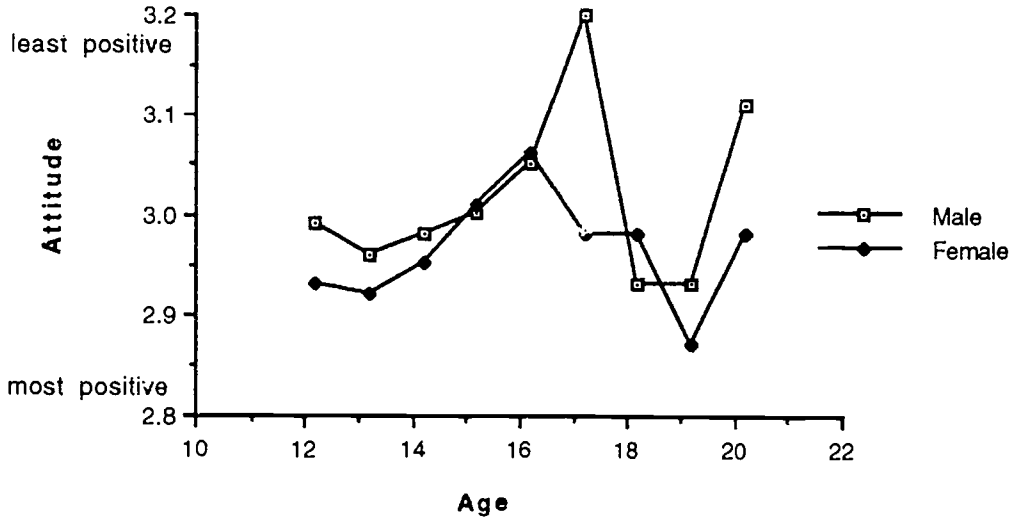
When student's attitude was examined in relation to the student's age, attitude was found to generally become more traditional as the student grew older (F=4.02, p.0001). An exception was the eighteen through twenty year old group who were among the more nontraditional in their attitude toward nontraditional careers. These students may represent groups who have returned to school, or have had their education interrupted, and are older than the usual high school student. Although these students expressed different attitudes than the younger students they comprised a small portion of the sample and were not significantly different that other student age groups. See Figure 8 for the relationship between attitude toward nontraditional careers and age.

Figure 8. Attitude as related to age.



Two way analysis of variance indicated that age was more important than gender as a factor influencing attitude. Males and females were found to be similar in their attitudes until the age of 16 years. At this point, males generally became more traditional while females became progressively less traditional. This finding suggest that the efforts by educators to encourage females to consider nontraditional careers may be succeeding. Females expressed considerably more accepting behavior as they grew older. The traditional attitudes held by males indicated that further work may be needed with this group. If females feel that their career aspirations are not supported by their husbands, boyfriends, an unnecessary impediment is placed on their careers. See Figure 9 for attitude toward nontraditional careers as related to age and gender.

Figure 9. Attitude as related to age and gender.

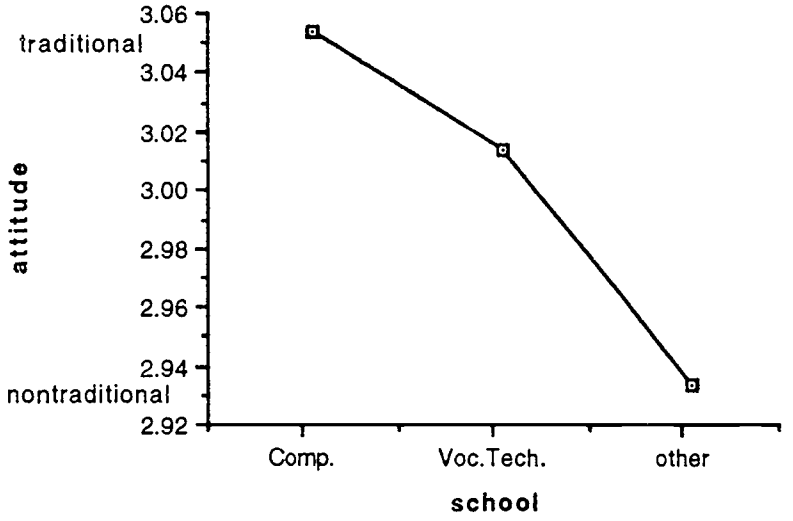


Attitude and Type of School

The most traditional attitudes were expressed by students enrolled in comprehensive schools. Students enrolled in comprehensive schools were significantly more likely (F 37.26, p.0001) to be

negative in their attitudes toward nontraditional careers than those enrolled in vocational technical schools. Students who classified themselves as "other" in terms of type of school expressed the most nontraditional attitudes. These students were not able to identify the type of school in which they were enrolled. All schools in which data was collected were either of the vocational technical or comprehensive type. See Figure 10 for the relationship between attitude toward nontraditional careers and type of school in which the participant was enrolled.

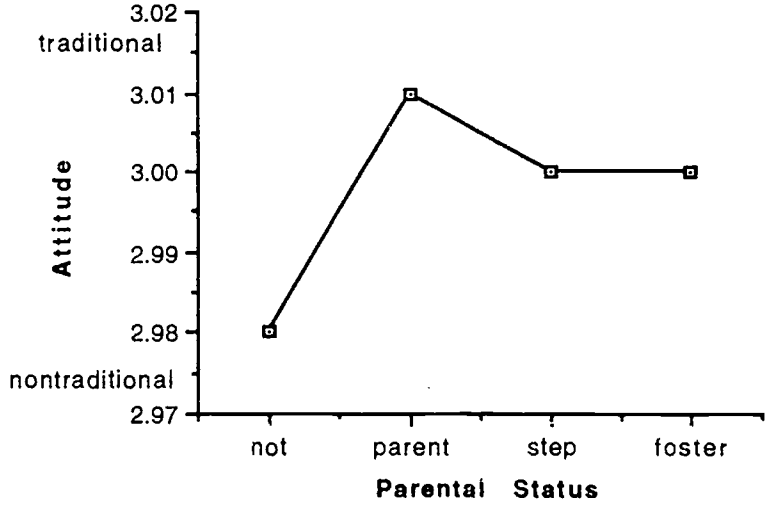
Figure 10. Attitude as related to type of school.



Attitude and Parental Status

Those who were not parents were not significantly different (F 1.82, p.1422) in their attitudes toward nontraditional careers than those who were parents, step parents, or foster parents. See Figure 11 for the relationship between attitude toward nontraditional careers and parental status.

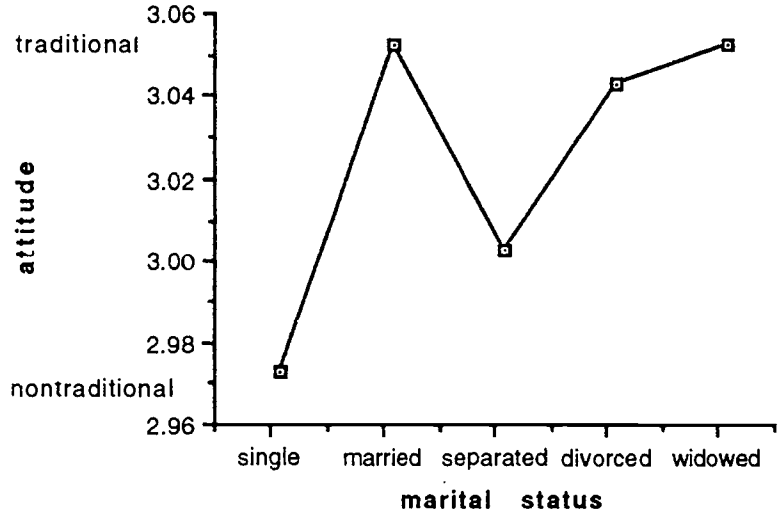
Figure 11. Attitude as related to parental status.



Attitude and Marital Status

Single students were more nontraditional in their attitudes than students who were married, divorced, or widowed (F=4.71, p.0003). Students who classified themselves as single or separated were the most nontraditional in their attitudes. See Figure 12 for relationship between marital status and attitude toward nontraditional careers.

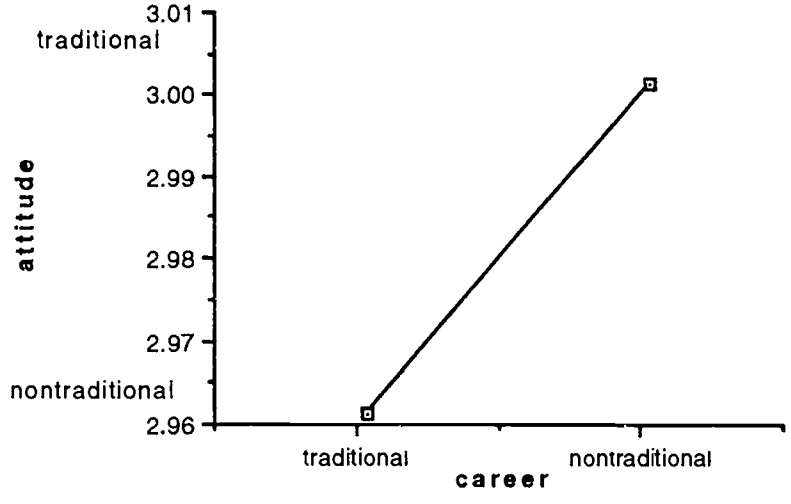
Figure 12. Attitude toward nontraditional careers as related to marital status.



Attitude and Career Preparation

Students who listed their career preparation plans as traditional were the most positive toward nontraditional careers (F 7.61, p.0059). See Figure 13 for the relationship between attitude toward nontraditional careers and type of career preparation.

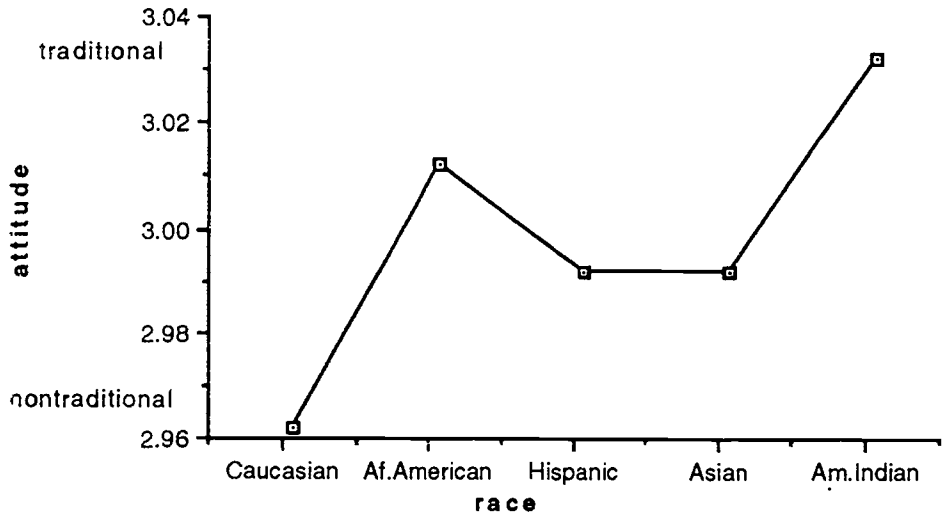
Figure 13. Attitude as related to traditional and nontraditional career preparation.



Attitude and Race

Caucasian participants were the most nontraditional group while the most traditional attitudes were expressed by American Indian participants (F=3.16, p.0077). Caucasian participants were significantly more nontraditional in their views than African American or American Indian participants. See Figure 14 for relationship between attitude and race.

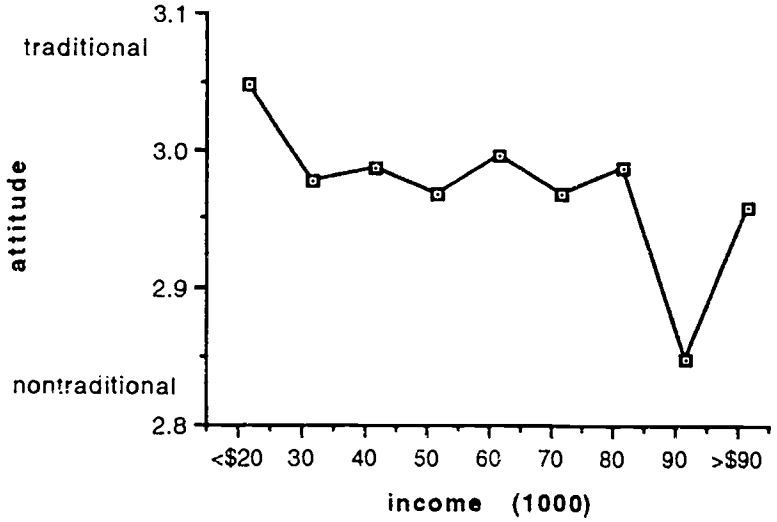
Figure 14. Attitude as related to race.



Attitude and Income

Those who categorized their family income as $81-90,000 annually were the most likely to have nontraditional attitudes (F=3.32, p.0009). The most traditional attitudes were among student's whose family incomes were less than $20,000. See Figure 15 for relationship between attitude and income.

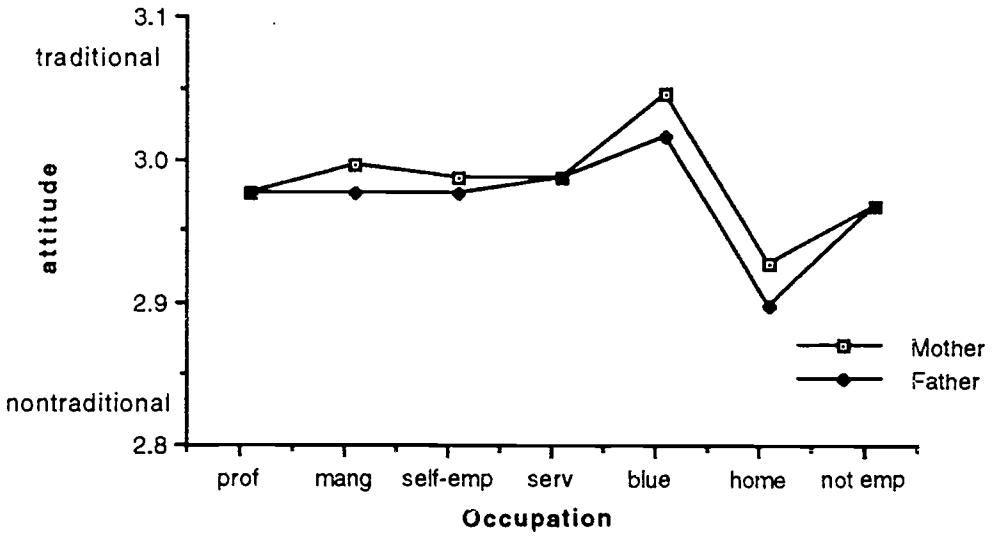
Figure 15. Attitude as related to income.



Attitude and Parent's Occupation

Both mother's and father's occupation was found to be related to attitude (F=2.28, p.03, and F=2.1, p.05, respectively). Students whose mothers were homemakers were more likely to be nontraditional in their views. Students whose mothers were in blue collar occupations were significantly more traditional than those whose mothers were engaged in professional, self-employed, or service positions, or homemaker positions. The occupation of the respondent's father was also found to be significantly related to attitude. Again the students with the most nontraditional views were those whose fathers were homemakers while the most traditional views were held by those whose parents were in blue collar occupations. See Figure 16 for relationship between attitude and parent's occupation.

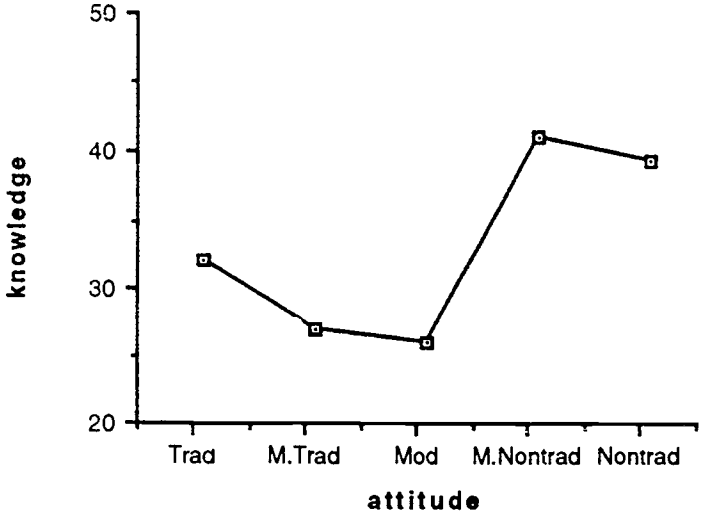
Figure 16. Attitude as related to parent's occupation.



ATTITUDE AND KNOWLEDGE

A strong relationship was found between knowledge about nontraditional careers and attitude toward them (F=38.06, p.0001) Students who were the most knowledgeable were the ones most likely to be nontraditional in their attitudes. See Figure 17 for relationship between attitude toward nontraditional careers and knowledge about them.

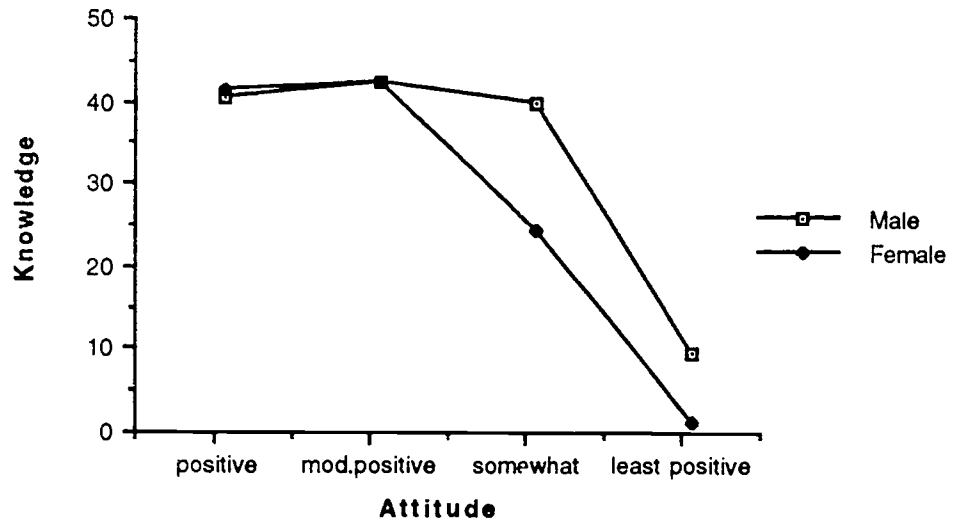
Figure 17. Attitude as related to knowledge about nontraditional careers.



Knowledge, Attitude and Gender

As males become more knowledgeable they become much more nontraditional in their attitudes toward nontraditional careers. The change is more pronounced in males than in females. See Figure 18. Males and females at low levels of knowledge are much more disparate in their attitude. As they become more knowledgeable they become more similar.

Figure 18. Knowledge and attitude as related to gender.



DISCUSSION AND CONCLUSIONS

This study was designed to examine how knowledge is related to the attitudes of students toward nontraditional careers for women. As students learn more about the training necessary and the salary which can be earned in various nontraditional careers, educators believe that more females will become interested in pursuing these types of careers. Students tend to pursue careers which are familiar to them and which offer status consistent with their background. By increasing student awareness of other career options students may be willing to pursue careers which may be both more personally and financially rewarding. Traditional attitudes about the types of jobs which are suitable for females have generally limited their career options to positions which tend to be low in both salary and status as compared to career options which have been considered to be suitable for males. Research indicates that females have been reluctant to prepare for careers which they considered to be detrimental to their marital and social relationships.

The findings of this research study are consistent with previous research indicating more traditional attitudes for males than for females. Hannah and Kahn (1989) reported girls to be less rigid in their career choices than boys. Yanico and Hardin (1986) also found males to be more stereotyped in their perception than females.

Examination of the relationship between attitude, age, and gender indicated that males and females reported similar attitudes toward nontraditional careers until the age of 16 years. At age 16 males expressed significantly more traditional attitudes than females. This finding may be the result of several factors. The participants in this study were enrolled in school districts which have received funding for gender-equity training over the past three years. The younger participants may be exhibiting the benefit of these programs while the older students could well be expressing attitudes which were well established prior to the beginning of these programs. Another factor which needs to be considered is that female students are becoming more aware of career possibilities as they near the end of their high school career. Considerable attention has been given to expanding the career possibilities of female students. The negative sanctions which have been evidenced in studies conducted during the 1980's may no longer be determining factors in female career attitudes.

The education level of the participants parents was found to be significantly related to attitude toward nontraditional careers. Students whose parents were homemakers or in blue collar positions were more likely to be traditional in their views than those whose parents were in professional or self-employed positions. Hannah and Kahn (1989) found the education level of the respondent's father to be important in determining girl's career choices. Females in male dominated careers were likely to have highly educated fathers. Family income was also found to be significantly related to attitude. Respondents whose family income was in the high income group were significantly more likely to accept nontraditional careers.

In terms of knowledge, most of the students were in the moderate to moderately high group. The age of the student was positively related to the level of knowledge exhibited. As students grew older they also became more knowledgeable about the type of training and the salary levels of nontraditional occupations. Examination of the relationship between attitude, knowledge level, and gender indicated that as males become more knowledgeable they become more nontraditional in their attitudes. This change was found to be more prevalent for males than for females. Males and females with low levels of knowledge are much more disparate in their attitudes. As they become more knowledgeable they become more similar in their attitude toward females in nontraditional roles.

The results of this research indicate the importance of continued education for students in gender equity training programs. As knowledge level increased both males and females are more accepting of females in nontraditional roles. These types of career choices are critical for females to be able to adequately support themselves and their families. To improve the economic well being of both individuals and families it is necessary for females to perform to the extent of their

potential; they must accept the idea that females have just as much right to career accomplishments as males.

Bibliography:

Condry, J., and Dyer, S. (1976). Fear of success: Attribution of cause to the victim. Journal of Social Issues, 32, 63-83.

Cote-Bonanno, J., and Bernstein, J. (1990). Status Report on Female Completers in New Jersey Vocational Education. Montclair State College.

Darnay, A. American Salaries and Wages Survey 1988/90. Gale Research, Inc. Detroit.

Hagen, R.L. and Kahn, A. (1975). Discrimination against competent women. Journal of Applied Social Psychology, 5, 362-376.

Hannah, J., and Kahn, S. (1989). The Relationship of Socioeconomic Status and Gender to the Occupational Choices of Grade 12 Students. Journal of Vocational Behavior, 34, 161-178.

Horner, M.S. (1972). Toward an understanding of achievement-related conflicts in women. Journal of Social Issues, 28. 157-175.

Lueptow, L.B. (1981). Sex-typing and change in the occupational choices of high school seniors: 1964-1975. Sociology of Education, 54, 16-24.

McLure, G.T., and Piel, E. (1978). College-bound girls and science careers: Perceptions of careers and facilitating factors. Journal of Vocational Behavior, 12, 172-183.

Pfost, K., and Fiore, M. (1990). Pursuit of Nontraditional Occupations: Fear of Success or Fear of Not Being Chosen? Sex Roles, 23, 15-23.

Teglasi, H. (1981). Children's choices of and value judgements about sex-typed toys and occupations. Journal of Vocational Behavior, 18, 184-195.

Yanico, B., and Hardin S. (1986). College Students' Self-Estimated and Actual Knowledge of Gender Traditional and Nontraditional Occupations: A Replication and Extension. Journal of Vocational Behavior, 28, 229-240.

Participating School Districts: Bayonne Public Schools, Essex County Vocational Technical School, Gloucester County Vocational Technical School, Irvington Public Schools, Mercer County Vocational Technical School, Middlesex County Vocational Technical School, Monmouth County Vocational Technical School, Newark Public Schools, Paramus Public Schools, Pinelands Regional School District, and Sussex County Vocational Technical School.

Appendix

Knowledge and Attitudes About Nontraditional Careers

PLEASE DO NOT MARK IN THE GREEN PART OF THE ANSWER SHEET. You do not need to include your name.

Part I:
A. Please indicate the TYPE OF TRAINING required for an entry level position in each of the following occupations:

Ex. Data Entry Keyer 2. Technical Training in High School

Occupation:

Training:
1. High School, General or Academic track
2. Technical Training in High School
3. Apprenticeship
4. Professional Certification
5. College Degree

1. Bank Clerk
   (banking, credit collections clerk, teller, transit clerk)

2. Bookkeeping and Accounting
   (accounting, taxation, bookkeeping, computing, machine billing, loan clerk)

3. Cabinet and Furniture Making
   (general woodworking, furniture making, mill work, and cabinet making)

4. Child Care Worker
   (general child care and guidance, child care aide, child care management, foster care/family care, and therapeutic recreation aide)

5. Commercial Art
   (photography, photo typesetting, computer graphics, photographic retouching, and color separation)

6. Electrician
   (electric and power transmission, electrician and line worker)

7. Food Management
   (food marketing, convenience store marketing and supermarket marketing)

8. Food Service
   (general food production, baking, chef/cook, food catering, food service and school food service)

9. Health Aide
   (home health aide, geriatric aide, nursing assistant, and pediatric aide)

10. Machinists
    (precision metal work, machine tool operation and tool and die making)

11. Office Occupations
(secretarial, stenography, word processing, typing, general office, clerical work)

12. Plumbing
(plumbing, pipe fitting, and steam fitting)

B. Please indicate which position would pay the HIGHEST AVERAGE SALARY for each of the following groups of jobs:

13. 1. Bank Clerk
2. Cabinet Maker

14. 1. Child Care Worker
2. Bookkeeper and Accounting

15. 1. Electrician
2. Office Occupations

16. 1. Machinists
2. Office Occupations

17. 1. Food Management
2. Plumbing

18. 1. Food Service
2. Carpenter

19. 1. Child Care Worker
2. Electrician

20. 1. Secretary
2. Cook

21. 1. Machinists
2. Health Aide

22. 1. Plumbing
2. Food Service

23. 1. Bookkeeping and Accounting
2. Cabinet and Furniture Making

24. 1. Photographer
2. Bank Clerk

Part II
Please answer the following questions based on your personal feelings about each of the ideas. There are no correct answers. Answer by checking the response which most closely represents your feelings using the following guide:

1. = Strongly Agree
2. = Agree
3. = Neutral
4. = Disagree
5. = Strongly Disagree.

25. Women who have paid jobs are unhappy.

26. Truck driving is an appropriate career for females.

27. Males interested in being hair stylists are sissies.

28. A woman can have a non-homemaking career while raising a family.

29. Money is the only reason that adult women work outside the home.

30. A woman can be a good mother while working full-time as a stock broker.

31. Most males do not have the finger coordination to be typists.

32. High school female students should be encouraged to enroll in traditionally all-male vocational courses, like air conditioning repair, if they are interested in them.

33. A man can be a good father while working full-time as a nurse.

34. Males should be encouraged to be fashion models if they are interested.

35. Women would not be good high school principals because they could not handle the boys.

36. Ballet dancing is an appropriate career goal for males.

37. Most women who work in machine shops are unfeminine.

38. If they are interested, women should be encouraged to plan professional careers that require more than four years of college.

39. Most men would marry a woman even though she works as a plumber.

40. Law is an appropriate career for women.

41. A man is avoiding his responsibilities when he is at home full-time.

42. Males should learn a job skill while in high school.

43. Being librarians is not a suitable career for men.

44. Women are smart enough to become engineers.

45. Men are better bosses than women.

Part III: Please indicate your:

46. Gender
    1. male
    2. female

47. Grade
    1. 7th grade
    2. 8th grade
    3. 9th grade
    4. 10th grade
    5. 11th grade
    6. 12th grade
    7. other

48. Age
    1. 12 years
    2. 13 years
    3. 14 years
    4. 15 years
    5. 16 years
    6. 17 years
    7. 18 years
    8. 19 years
    9. 20 or older

49. Please indicate the type of school in which you are enrolled.
    1. comprehensive high school student
    2. vocational technical high school student
    3. other

50. Please indicate your parental status.
    1. not a parent
    2. parent
    3. step parent
    4. foster parent

51. Please indicate your marital status
    1. single
    2. married
    3. separated
    4. divorced
    5. widowed
    6. other

52. Is your career interest considered by others to be traditional or nontraditional for your gender? Ex. traditional: female nurse, male plumber
non traditional: male nurse, female plumber

1. traditional for my gender
2. nontraditional for my gender

53. With which of the following ethnic groups do you most closely identify? (Please select only one)

1. Caucasian, not Hispanic
2. African-American
3. Hispanic
4. Asian
5. American Indian
6. other

54. Which category best describes your annual family income?

1. under $21,000
2. $21-30,000
3. $31-40,000
4. $41-50,000
5. $51-60,000
6. $61-70,000
7. $71-80,000
8. $81-90,000
9. over $90,000

55. What is the occupation of your mother/guardian?

1. professional
2. managerial
3. self-employed
4. service worker
5. blue collar
6. homemaker
7. not employed outside the home

56. What is the occupation of your father/guardian?

1. professional
2. managerial
3. self-employed
4. service worker
5. blue collar
6. homemaker
7. not employed outside the home

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