In 1996, the effectiveness of New Jersey's Perkins Act-funded single parent/displaced homemaker and gender equity programs were evaluated by using a modified version of MacDonald's Sex Role Survey to determine the effects of program participation on participants' attitudes toward four dimensions of sex equity: work, behavior, equity, and home. Participants completed the survey before beginning their program and 6 weeks after having completed the program segment most likely to affect their attitudes toward sex stereotypes. Matched pretest and posttest data were collected for 1,992 program participants throughout the state. As in 1995, the mean posttest score for all participants significantly exceeded the mean pretest score, thus indicating that program participation caused participants to develop more equitable attitudes. Caucasian participants had the highest mean posttest score. Females demonstrated significant attitude changes on all four dimensions of the survey whereas males demonstrated significant attitude change only on the behavior dimension. When the scores were analyzed by age, the most significant changes occurred in the work dimension. All four racial groups studied demonstrated significant attitude changes on the work dimension; however, only Black and Caucasian participants demonstrated significant attitude changes on the behavior dimensions. (Contains 13 references.) (MN)
PROGRAM PARTICIPANTS INCREASE EQUITABLE ATTITUDES
RESEARCH BULLETIN NO. 20

CAREER EQUITY ASSISTANCE CENTER FOR RESEARCH AND EVALUATION
MONTCLAIR STATE UNIVERSITY

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During program year 1996, single parent/displaced homemaker and gender equity programs funded through the Carl D. Perkins Act in New Jersey conducted a series of evaluations to assess the effectiveness of the programs. The results were analyzed independently by the Career Equity Assistance Center for Research and Evaluation at Montclair State University (CEAC). This bulletin represents one in a series of four reports on test results obtained during program year 1996.

During program year 1996, scores reflected significant changes toward more equitable attitudes concerning sex role stereotyping for all participants combined on the total Sex Role Survey and on each of the four dimensions measured: Work, Home, Social and Behavior.

Other bulletins in this series present results of testing for self esteem, knowledge of technical careers and equity standards.

### CHANGES IN SEX ROLE STEREOTYPING BY PROGRAM PARTICIPANTS

Sex role attitudes are one factor that has contributed to economic inequities for females. Programs funded under the Carl D. Perkins Vocational and Applied Technology Education Act, P.L. 101-392, sex equity set aside provide occupational education and services that address issues related to gender bias.

### REVIEW OF LITERATURE

Gender stereotypes reported in the literature have included classifications of feminine and masculine attributes (Harris, 1994), gender subtypes (Six and Eckes, 1991) and occupational sex roles (Gottfredson, 1985). Social stereotypes are characterized as beliefs and expectations that are attributed to a group of humans (Hamilton and Trolier, 1986; Six and Eckes, 1991).

Both gender and ethnicity have been related to sex role stereotyping. Females generally have more equitable sex role attitudes than males (King and King, 1990; McKinney, 1987; Bernstein, Coté-Bonanno and Reilly, 1992; Tuck, Rolfe and Adair, 1994). African-Americans considered more affective traits common to both sexes than did other ethnic groups. Anglo-Americans rated more items desirable for one gender than Hispanic-Americans (Harris, 1994).

Adolescent girls typically explore fewer career options than adolescent boys (Farmer, 1995) in part because of occupational sex role stereotyping (Gottfredson, 1985).
1985). Women continue to be underrepresented in the higher paid and higher prestige occupations (National Science Foundation, 1994). Sex role stereotypes are one of the gender related biases that delay the movement of women into these careers (Coyle-Williams, 1992).

In previous program years, New Jersey equity programs have demonstrated the ability to change sex role stereotyping by participants to reflect more equitable attitudes (Bernstein, Coté-Bonanno, Reilly, Carver and Doremus, 1995a; Bernstein, Coté-Bonanno, Reilly, Carver and Doremus, 1995b).

METHOD OF STUDY

Data was collected from participants enrolled in single parent/displaced homemaker and sex equity programs throughout New Jersey during the program year 1996. A modified version of MacDonald's Sex Role Survey (MacDonald, 1976) was used to determine attitudes concerning overall sex role stereotypes. Attitudes were also determined for four dimensions of equity: equality in professions (Work); sex appropriate behavior such as customs and manners (Behavior); social equity (Equity); and domestic power (Home). Matched pre and post tests were collected from 1,992 subjects.

Pre tests were completed prior to the beginning of the program. Post tests were completed six weeks after completion of the program segment most likely to affect sex role stereotyping. Completed tests were scored by program personnel and the results forwarded for analysis to the CEAC for Research and Evaluation.

TOTAL SEX ROLE SURVEY

Of the 1,992 participants who completed the Sex Role Survey, 1,468 (75%) were females. The largest groups of participants were between the ages of 12 and 15 years (43%) and between 20 and 35 years (32%).

Over half of the participants (58%) classified themselves as Caucasian. Remaining respondents were Black (23%), Hispanic (9%) and Other (9%). American Natives and Asian/Pacific Islanders were each less than 1% of the total sample.

The mean post test score for all participants on the Sex Role Survey (M138.0) was significantly higher than the mean pre test score (M132.5). This change reflects a shift toward a more equitable attitude as a result of program participation. The mean post test score for males reflected a nonsignificant shift toward a more equitable attitude. Mean pre and post test scores were higher for females than for males.

Caucasian participants had the highest mean post test score (M140.6). The mean post test score (M133.3) was lowest for participants in the Other category (see Figure 1).

DIMENSIONS ON THE SEX ROLE SURVEY

On each of the four dimensions of the Sex Role Survey (Home, Behavior, Work and Social), mean post test scores for all participants combined were significantly higher than mean pre test scores. Mean post test scores were also significantly higher than mean pre test scores on each of the four dimensions for females. Mean post test scores for males were higher than the mean pre test scores on the Behavior, Work and Social Dimensions of the Sex Role Survey; however, only the increase on the Behavior Dimension was significant. On each of the four dimensions, the mean pre and post scores were higher for females than for males.

![Figure 1. Pre and post test scores on the Total Sex Role Survey by race/ethnicity Program Year 1996](image-url)
Mean post test scores on the total Sex Role Survey were significantly higher than pre test scores for:
- all participants combined,
- females,
- all ages except for participants 14-15 years old,
- participants who classified themselves as Black, Caucasian, or Hispanic.

Age and Dimensions of the Sex Role Survey
When scores were analyzed by age, more significant changes occurred on the Work Dimension than on other dimensions. For the Work Dimension, six of the 10 age ranges had mean post test scores that were significantly higher than mean pre test scores. Five age ranges had significantly higher mean post test scores on the Behavior Dimension.

The mean post test scores for participants who were 26-30 years of age and 31-35 years of age were significantly higher than mean pre test scores on all four of the dimensions. Mean post test scores for participants who were 14-15 years of age and 46 years of age and over were not significantly higher than pre test scores on any of the dimensions.

On the Home Dimension, mean scores on both the pre and post tests were considerably lower for participants 14-15 years of age than for other age groups. There was a tendency for mean post test scores to increase with age after the age of 20.

Race/Ethnicity and the Dimensions of the Sex Role Survey
On the Work Dimension, the mean post test score was significantly higher than the mean pre test score for each of the four racial/ethnic groups analyzed. Only Black and Caucasian participants had significantly higher scores on the Behavior Dimension.

Participants who classified themselves as Black or as Caucasian had significant increases in their mean post test on three of the four dimensions examined. For both of these groups, scores were significantly higher on the Work and Behavior Dimensions. The mean post test score for Black participants on the Home Dimension was higher than their mean pre test score, while for Caucasian participants, the mean post test score was higher on the Social Dimension.

Discussion
As in previous program years, participants in the single parent/displaced homemaker and sex equity programs showed more equitable attitudes concerning sex role stereotyping after program participation. Mean post test scores on the Sex Role Survey were also significantly higher than mean pre test scores in program year 1995 (Bernstein, et al., 1995b). The change toward a more equitable attitude in program year 1994 was not significant (Bernstein, et al., 1995a).

On the dimensions, equity programs were even more successful in changing attitudes than in previous years. In the current year, mean post test scores were significantly higher on all four dimensions of the Sex Role Survey, while in previous years only selected dimensions showed significant increases. In 1995, only mean post test scores on the Home and the Behavior Dimensions were significantly higher for all participants combined and in Program Year 1994, only mean post test scores on the Work and the Behavior Dimensions were significantly higher than mean pre test scores for all participants combined.
The equity programs in New Jersey have been consistently effective in changing the attitudes of participants to reflect more positive attitudes toward sex roles:

- Total Sex Role Survey scores were significantly higher after program participation in both program years 1995 and 1996.
- The change in the Behavior Dimension was significant in program years 1994, 1995 and 1996 for all participants combined.
- The change in the Work Dimension was significant in program years 1994 and 1996 and in the Home Dimension in program years 1995 and 1996.

SUMMARY AND RECOMMENDATIONS

The sex equity set asides in the Carl D. Perkins Vocational and Applied Technology Education Act have been successful in several important ways as listed below.

- In the last two years, program participants have shown significant increases in self esteem, knowledge of nontraditional careers and equity standards and equitable attitudes concerning sex role stereotyping.
- In the last four years, the Bureau of Gender Equity and the three statewide career equity assistance centers and model gender equity programs.
  - providing technical assistance and advice on expanding nontraditional career opportunities
  - gathering, analyzing and distributing data on (1) the effectiveness of career education programs in the State work force readiness system in meeting the education and employment needs of women and girls and (2) the status of men and women students and employees in career education programs.

- The continuation and expansion of statewide and model programs should include, but not be limited to:
  - administering the gender equity grant program for single parents, displaced homemakers, and single pregnant women, statewide career equity assistance centers and model gender equity programs.

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