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ABSTRACT

The participation and status of minority persons and women in educational research and development organizations and researchers' perceptions of inequitable treatment and effective responses to inequity were examined in three surveys by the American Educational Research Association. These surveys were undertaken to remedy the lack of specific information on sex and ethnic differences. The first survey of research organizations found both women and minorities underrepresented, with women more apt to be part time workers or clustered in lower level full time jobs. Minorities were clustered at lower levels as well, but in the private nonteaching sector whereas women were in the public education sector. The survey of individual researchers found strong sex differences on most variables, with the differences always favoring men. Complex racial differences favored whites, but not with the consistency or degree shown in sex differences. Researchers' uses of work time and research funding showed no racial differences. Most inequitable treatment mentioned by minorities and women related to employment rather than professional activity. Self-selected individuals in the telephone survey indicated negative inequitable treatment but made few effective responses to the treatment. In their suggestions to increase equity, few had much hope of its effective achievement.
 (Author/CM)

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Survey on the Status of Educational Researchers

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February, 1982

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Executive Summary

In spite of the interest of both the government and professional organizations in increasing the participation of minority persons and women in research and development, there has been little information about the relative status of these groups. Previous research has either not broken down information by sex and ethnic background or has broken it down in such a way that comparisons across minority groups could not be made.

To remedy this lack and to study researchers' perceptions of inequitable treatment and effective responses to that treatment, a series of three surveys were conducted. The first surveyed the organizations found to be active producers of educational research, development, dissemination and evaluation (R.D.D&E) to determine the number of minority and majority women and men working full or part time in educational R.D.D.&E. The second survey was of individual researchers to determine their relative participation and status in the profession. The third survey interviewed self selected individuals, by telephone, to collect information about individual responses to inequitable treatment.

The first survey, the organizational survey, found both women and minorities underrepresented in educational research organizations. Women are more apt to be part time workers, and even when full time, are clustered at the lower job levels. Minorities, while not more apt to be part time workers, are clustered at the lower job levels as well. Minorities are most apt, proportionately to be found in the private, non-teaching sector while women are most apt, proportionately to be found in the public education sector.

The second survey, the individual survey found strong sex differences on most variables, with the differences always favoring men. Racial differences were more complex. While most differences favored Whites they did not do so with the consistency or degree found in sex differences. There were some surprising areas of no difference including how people spent their work time and where they received their research funding.

4 Much inequitable treatment was mentioned by minorities and women, most of which was negative and related to employment. There was however no correlation between amount or type of inequitable treatment mentioned and professional productivity, activity or professional rewards.

The third and final survey, the telephone survey, is perhaps best characterized by what was not found rather than what was. While most respondents indicated they had received

negative inequitable treatment, few had responded in ways that they felt were effective. For the most part their responses were limited to doing nothing or to talking about the problem with peers or superiors. Respondents also had few ideas for alternative ways that they could have responded to inequitable treatment. Finally respondents were asked how they felt equity in research could be increased. Their responses fell in four categories - suggestions for minorities and women themselves, suggestions for employers, suggestions for professional organizations and suggestions for government. Few however had much hope for the effectiveness of their solutions in achieving equity.

It appears that at this time we still don't know what to do or who to do it to to achieve equity in educational research. We do however, now know from where we are starting.

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I. INTRODUCTION

"To increase the participation of minority persons and women in the research and development effort of the nation" has been a major goal of the National Institute of Education since its inception. It is also a goal of numbers of researchers and research organizations. The achievement of this goal has been severely hampered because of a lack of awareness of the relative status of minority and majority women and men in educational R and D and of how that status has been effected both by discrimination and attempts to remedy discrimination. The goal of this study was to obtain much needed data in this area.

In 1978 the United States Commission on Civil Rights commented that "Systematic evaluation of the nation's progress toward equality has long been limited by both the types of statistical measures available and the types of raw data available" (1978, p.1). While the Commission was commenting on the country as a whole, the statement held particularly true for educational research and development. For example, data collected by the American Registry of Research and Research Related Organizations in Education, an NIE funded effort by the Bureau of Social Science Research to collect information about people and organizations involved in educational R and D, was not broken down by race or sex. Neither was the data in Clark and Guba's 1977 survey of the status of educational knowledge production and utilization categorized by sex or race.

While such data are lacking in educational R and D, they are not lacking in other social science areas. Psychology, economics, sociology and anthropology are just some of the areas that have surveyed the status of women and minorities (Krenkel, 1975). However, the surveys that have been done have, in general, focused either on majority women to the exclusion of minorities or on minorities without breaking the data down by sex. Pollard's comment that work done on Blacks tends to assume no sex difference while the work on women is directed primarily toward white females, holds true for other minority groups as well (Pollard, 1977).

Frequently ethnic breakdowns are not given at all as was the case in The Women Doctorate in America (Astin, 1969) and Women, Men and the Doctorate (Centra, 1974). If breakdowns are given, the categories are frequently White, Black and Other as was the Survey of Authors of Research on Educational Topics (Bureau of Applied Social Science, 1970) making it impossible to draw conclusions about Hispanics, American Indians or Asian/Pacific Americans.

Some data on women's participation in specific professional R and D activities such as reviewing manuscripts, publication of articles, chairing of meetings and participation in professional committees are currently being collected by AERA, but this information is not being broken down into majority/minority categories and no comparable information is being collected for minorities in general (Russell, 1981).

This lack of identifiable minority data was also a problem in the only study of the status of women in educational R and D. The number of minority professionals was so small (16 Blacks, 7 American Indians, 7 Asian Americans, and 6 Spanish surnamed) that no analysis by minority group could be done (Lipman-Bluman et al., 1975). This survey, conducted by the American Educational Research Association's Ad Hoc Committee on the Role and Status of Women in Educational R and D, with the assistance of NIE staff and facilities, collected information from a variety of sources about the relative status of women and men in educational R and D. Data from a survey of the entire AERA membership, a more detailed survey of a sample of 7% of the membership and records of participation in the Association's activities were analyzed to describe the status of women members of AERA. While the individuals sampled were all members of AERA and thus not necessarily representative of R and D professionals in general, the survey provided much valuable data.

The surveys that were done, in spite of the information they provided, left serious gaps. In order to fill those gaps, the Committee on the Role and Status of Women for the American Educational Research Association, in conjunction with the Committee on the Role and Status of Minorities developed a proposal to survey minority and majority, women and men educational researchers. This proposal, with the approval of the AERA Council, was submitted, as an unsolicited proposal to the National Institute of Education and was funded.

The purposes of the project was several fold. The first was to collect basic information, which was lacking; about the members of women and minorities in educational research, their locations and their level of participation. However this was not enough. United States Commission on Civil Rights stated, "Although statistical portraits remain essential, they generally accept the data on minorities and women at face value and do not seek to pinpoint the genuine disparities that effect them" (1978, p.1). In depth questions dealing with the perceived sources of and responses to discrimination by sex and race in training, employment, promotion and resource allocation were needed in order to do a more complete analysis of the relative status of minority and majority women in R and D.

Thus in this survey, educational researchers and research organizations were studied and studied in such numbers that cross sex and cross cultural interactions could be analyzed.

Up to date, comprehensive and in-depth data on the status of professionals in educational R and D are needed by the developers of plans to increase equity in educational research and by evaluators seeking to assess the effectiveness of those plans. This survey seeks to provide some of that information.

II. Methodology of the Surveys

The project consisted of three different yet related surveys. The surveys were:

1. a global survey of the organizations deemed by the Bureau of Social Science Research (BSSR) survey to be active producers of educational research, development, dissemination and evaluation (RDD and E). The survey was to determine the number of minority and majority women and men working full or part time in educational RDD and E.
2. a detailed survey of a sample of individual RDD and E professionals, in order to determine their relative participation and status in the profession.
3. a telephone survey of a sample of individuals involved in the detailed survey, in order to collect information about individuals' responses to discrimination.

To assist in the development of the three surveys, an Advisory Board composed of majority and minority women and men educational researchers, was assembled. From this Advisory Board, a subcommittee of four researchers was named to work more intensively with the project. The subcommittee was composed of:

Dr. Carol Dwyer, Educational Testing Service
Dr. Tito Guerrero, Corpus Christi State University
Dr. Robert Murphy, University of Wisconsin
Dr. Elois Scott, University of Florida

The other Advisory Board members were:

Dr. Susan Bailey, Council of Chief State School Officers
Dr. Michael Kean, Educational Testing Service
Dr. David Krathwohl, Syracuse University
Dr. Betty Morrison, University of Michigan
Dr. Floraline Stevens, Los Angeles City Schools
Dr. Albert Yee, University of Montana
Dr. Joanne Stolte, Research for Better Schools and
Dr. Naida Baġenstos, Project Officer, National Institute
of Education.

The Advisory Board played a major role in the development and refinement of the questionnaires as well as providing assistance in other areas. The subcommittee of the Advisory Board met twice during the project while the full Board met once.

The Organizational Survey

The major purpose of the organizational survey was to collect information on the numbers of minority and majority women and men working as RDD and E professionals and their location and job level. The original draft of the organizational questionnaire asked questions about the sex and ethnic background of employees based on Equal Employment Opportunities Commission reports. It also asked for breakdowns of employees by job levels and by part and full time employment. The draft questionnaire was reviewed and revised by a subcommittee of the Advisory Board and later by the full Advisory Board. The revised questionnaire was then field tested by being sent to a sample of thirty-five institutional members of the American Educational Research Association.

Each institutional representative received a copy of the questionnaire with a cover letter and a short field test questionnaire. The cover letter asked the subjects to fill out the questionnaire and to indicate whether they felt the questionnaire was too long and how they felt about the format.

Seven questionnaires were returned. Four respondents indicated that it had taken an average of 17.5 minutes to complete with time ranging from 10 to 30 minutes. One respondent did not fill out the questionnaire because he felt that too much data collection was required. None of those completing the questionnaire felt that it was too long. Respondents' comments indicated however that using EEOC reports was a problem because, for example, one did not know what EEOC meant and another did not have access to EEOC reports. Other respondents did not like the job level categories feeling that they were not appropriate to all organizations. University personnel seemed to have some problems with the questionnaire, feeling that their faculty should not be defined as researchers. Based on these results and further review by the Advisory Board, the questionnaire was revised.

The revised questionnaire was sent to the 2434 organizations which were found by the Bureau of Social Science Research survey to conduct educational research, development, dissemination or evaluation. The sample included 1268 academic units, 638 public education units and 478 others. The initial mailing consisted of a cover letter, a one page questionnaire and an addressed envelope. This packet was sent out in mid April. Six weeks later a second packet including another copy of the questionnaire and a cover letter was sent to nonrespondents. A total of 835 responses were received for a response rate of 35.19%.

As the questionnaires were received they were coded by institutional type and geographic location. In order to facilitate future data analysis, the questionnaires were also coded by the same identification number used in the BSSR survey. The questionnaires were then entered into the computer, checked and analyzed. Because of the type of data being collected the data analysis was primarily descriptive, using frequency counts and percentages. Inferential statistics such as Chi Square were also used when appropriate.

The Individual Survey

The major purpose of the individual survey was to determine the relative status of minority and majority women and men RDD and E professionals in terms of salary, productivity, professional recognition, allocation of resources and perceived discrimination. The original draft of the survey questionnaire asked questions about individual background, education, employment and professional activities. The draft questionnaire was reviewed and revised by a subcommittee of the Advisory Board and later by the full Advisory Board. The revised questionnaire was then field tested by being sent to a sample of thirty-five members of the American Educational Research Association. The thirty-five included five members selected randomly from the mailing lists of each of the following AERA Special Interest Groups; Research Management, Research on Women and Education, Research Focus on Black Education, Research Focus on Hispanic Issues in Educational Research, American Indian/Alaskan Native Education and Research Focus on Asian and Pacific American Research.

Each person received a copy of the questionnaire with a cover letter and a short field test questionnaire. The cover letter asked the subjects to fill out the questionnaire and to indicate whether they felt the questionnaire was too long and if they felt the format was appropriate. Nineteen questionnaires were returned. The results indicated that the mean completion time for the questionnaire was 17.9 minutes, with a standard deviation of 6.6. The times reported ranged from 7 to 30 minutes. Of the 17 respondents who completed the field test questionnaire, 17 or 100% indicated that the questionnaire was not too long. Twelve or 70.6% indicated that the format of the questionnaire was appropriate. Some of the comments about the format included suggestions that background questions be put last, questions with less social desirability be used, Yes/No questions on professional activities not be used and answer responses of "not applicable" and "not relevant" be included. Based on these results and further review by the Advisory Board, the questionnaire was revised.

The revised questionnaire was sent out to all of the minority group members of AERA (408 Blacks, 207 Asians, 50 American Indians and 229 Hispanics) and a sample of 500 White male and 500 White female members. The initial mailing included the questionnaire, a cover letter, an addressed envelope and a postcard to complete if they desired to participate in a telephone interview. This packet was sent out in mid April.

Six weeks later a follow-up postcard was sent to the nonrespondents requesting their cooperation. A total of 863 responses were received for a total response rate of 44.7%.

As the questionnaires were received, they were coded by ethnic background, entered in the computer, checked and analyzed. The analysis was done using SPSS and involved descriptive and inferential statistics including frequency counts, means and standard deviations, percentages, Chi Squares, analysis of variance and correlation.

In order to assist with the follow-up, the questionnaire was developed to be confidential rather than anonymous. A master list held by the project directors keyed assigned ID numbers to individual responses. After the data analysis was completed the master list was destroyed. The data, both in its raw and analyzed state is now anonymous.

The Telephone Survey

The major purpose of the telephone survey was to collect information about the ways that individuals respond to inequitable treatment and their perceptions of the effectiveness of their responses. The original draft of the interview schedule asked questions about responses to discrimination, perceptions of the effectiveness of those responses, suggestions for alternative responses and ideas respondents might have for increasing equity in educational R and D. The draft interview schedule was reviewed and revised by a subcommittee of the Advisory Board and by the full Advisory Board. The revised interview schedule was then field tested by being used in telephone interviews with a number of respondents to the individual survey, who indicated their willingness to be interviewed. Based on the field testing response, the schedule was revised to include a written introduction to be read at the beginning of each interview. Also included was a background question on where the interviewee was employed.

In order to select a sample for the telephone interviews, the individual questionnaires included a postcard to be completed if respondents would be interested in being interviewed regarding their experiences with and effective responses to inequitable treatment. A postcard requested their names, telephone numbers and a list of times when they could be reached. Over 400 responses were received. From these responses a sample of 85 was selected. The sample was selected in order to include women and men from each of the ethnic groups (Black, White, Hispanic, Asian/Pacific Island and American Indian). A total of 75 interviews was made, with interviewers being unable to contact 10 people.

The interviews were conducted over the summer of 1981, by one of the Project Directors and a consultant. The two interviewers worked together during the field test to insure that their interviewing techniques were comparable and their interviewer reliability was as high as possible.

During the interviews notes were taken on the interviewees' responses. These notes were written up and coded with the same ID number used in the individual survey. The results were then summarized.

III. Organizational Survey Results

The organizational survey questionnaire was sent out to the 2434 organizations identified by the Bureau of Social Science Research as being active performers of educational research, development, dissemination, and evaluation. Fifty-four addresses were found to be no longer valid and correct addresses could not be found. Of the 2389 questionnaires sent to valid addresses, a total of 835 responses (35.19%) were received. This response rate, achieved with an initial mailing and one follow-up, may help to refute the idea that asking institutions questions about the ethnic background and sex of their employees has a strong negative effect on responses rate. For example the BSSR survey, according to the advisory board members, did not ask questions about sex and ethnic background in order to increase response rate. Yet its response rate after an initial mailing and one follow-up was 31%, 4% less than the rate of the survey focusing on sex and ethnic background data. Of the 6346 organizations contacted by BSSR, 1953 responded either by filling out the questionnaire or a short postcard. Indeed of the 2434 organizations who responded and met the criteria necessary to be designated as active performers of educational research, development, dissemination and evaluation, 44% responded to the mail questionnaire or postcard and 56% responded to telephone calls. Thus it appears, in this instance at least, questions dealing with sex and ethnic background need not have an appreciable negative effect on response rate.

A comparison of the 835 respondents to this survey and the total population as indicated by the 2434 BSSR respondents shows few differences. As Table 1 indicates, while the proportion of respondents by organizations type differ significantly, that difference is primarily in the "All Others" category.

Table 1
Type of Responding Organizations

	BSSR Survey	Survey of Educational Researchers
Public Education Sector	688/28.3%	280/33.5%
Academic Sector	1268/52.19%	447/53.5%
All Others	478/19.6%	108/12.9%
Total	2434	835

$$\chi^2 = 18.65$$

$$p < .001$$

FIGURE 1

THE GEOGRAPHIC DISTRIBUTION OF EDUCATION RDD&E ORGANIZATIONS
IN THE CONTINENTAL UNITED STATES

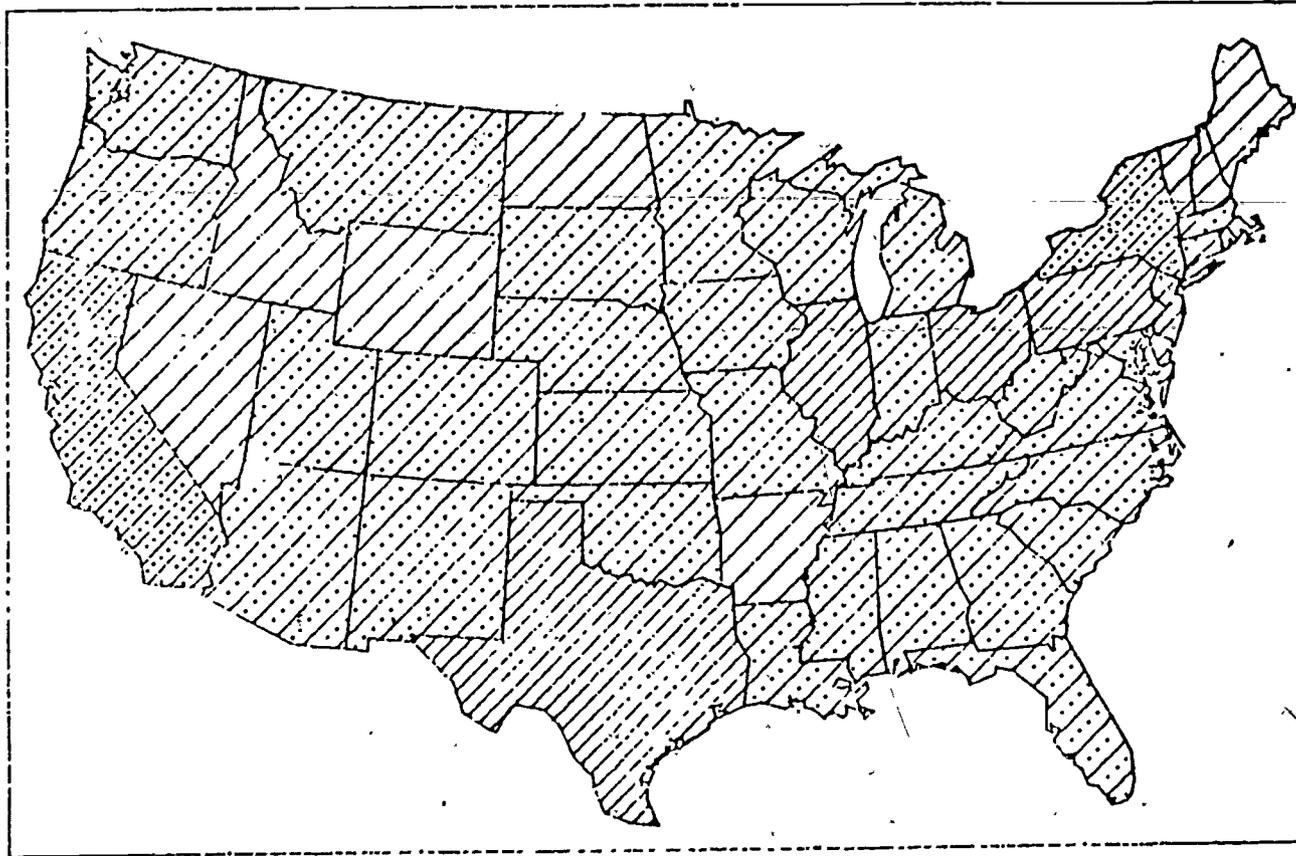
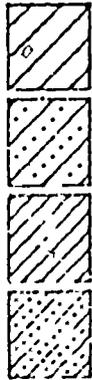
NUMBER OF
ORGANIZATIONS

0 - 9

10 - 99

100 - 199

200 +



The smaller percentage of respondents in the "All Other" category (profit and nonprofit educational organizations not engaged in teaching) for the Survey of Educational Researchers (SER) maybe explained because 45 of the 54 unusable addresses were from the "All Other" category. These 45 comprised almost 10% of the original sample of "All Others". Thus a smaller percentage of "All Others" respondents may be due to the smaller percentage sent out.

The SER sample does not appear to differ greatly from the BSSR sample in terms of geographic location. As Table 2 indicates the SER sample comes from throughout the country with the greatest concentration in the midwest and the lowest concentration in the Rocky Mountain states and the southwest.

Table 2
Geographic Distribution of Responding Organizations
Survey of Educational Researchers

	<u>Number</u>	<u>Percent</u>
Northwest	128	15.4%
Southeast	125	15%
Mid-Atlantic	112	13.3%
Midwest	248	29.7%
Rocky Mountains	48	5.6%
Southwest	65	7.8%
Far WEST	109	13.1%

The BSSR survey reported geographic distribution by state, indicating the range of organizations within each state. As Figure 1 indicates, the Rocky Mountain area appears to have the lowest concentration of organizations, while with the exception of individual states such as New York and California, the midwest appears to have the largest concentration of research organizations.

There is a major difference between the BSSR sample and the SER sample. As mentioned earlier when the BSSR survey was conducted in 1976-78 all of the 2434 organizations were actively involved in educational research. By 1981, 168 or 20% of the responding organizations indicated that they were no longer involved in research. As Table 3 indicates, 4.6% of the public education sector, 16% of the academic sector and 25.7% of the others responding are no longer doing educational research.

Table 3
Organizations Doing Research in 1976-78

	Organizations Currently Doing Educational Research	Organizations No Longer Doing Educational Research
Public Education Sector	211/75.4	69/24.6%
Academic Sector	375/84%	71/16%
Non-teaching Organizations	81/74.3%	28/25.7%

Organizations that indicated that they were still actively involved in educational research were asked to indicate the amount of time they spent in research, development, dissemination evaluation, policy studies, administrative and teaching and training. Table 4 provides a summary of that information.

Table 4
Principal Activities of Research Organizations
(In Percentages)

<u>Activity</u>	<u>Mean</u>
Research	17%
Development	11%
Dissemination	8%
Evaluation	16%
Policy Studies	5%
Administration	15%
Teaching and Training	22%

The range of time spent in these areas was from 0-100% with exception of development where the range went from 0-75%.

Organizations were also asked to indicate the sources of their RDD and E funds. Table 5 indicates the results.

Table 5
Sources of Organizational RDD and E Funds
(In Percentages)

<u>Source</u>	<u>Mean</u>
Federal Government	28%
State Government	33%
Local Government	14%
Foundations	4%
Corporations	1%

The largest percentage of RDD and E funds comes from state governments, which with the large number of organizations from the public education sector and from state colleges and universities is not surprising. The second largest source of funds is the federal government. This does differ from the BSSR report which found the government accounting for 53% of the RDD and E Funds, state governments for 18% and local governments for 4%. This difference may in part be explained by changes in government research funding policies in the past few years.

The major goal of the organizational survey was to provide information, lacking in the original BSSR survey, on the ethnic background and sex breakdown of RDD and E professional personnel. It appears that the sample of BSSR organizations responding to the SER are representative of the original group in terms of organizational type and geographic location. There are some differences in sources of funding but that may be ascribed to different methods of data collection (the SER asked for percentage of funds from each source while the BSSE asked for actual dollars from each source) and to the general change in patterns of funding educational RDD and E from 1976-1981.

The 667 organizations still actively involved in educational RDD and E were each asked to indicate the number of their full and part time RDD and E professionals by ethnic background and sex. These organizations indicated that they had a total of 9055 full and part-time employees. Of those, 6610 (73% full time and 2445 (27%) were part-time. Table 6 gives the sex and ethnic background breakdown for these professionals.

Table 6
RDD and E Full and Part-time Professionals
(Full-time Employees)

	<u>Men</u>	<u>Women</u>	<u>Totals</u>
White	3573	2224	5797/87.7%
Black	253	252	505/7.6%
Hispanic	73	82	155/2.3%
Asian/Pacific Island	59	69	128/1.9%
American Indian	13	12	25.4%
	<u>3971/60.7%</u>	<u>2639/39.9%</u>	

$$\chi^2 = 48.835$$

$$p < .0001$$

(Part-time Employees)

	<u>Men</u>	<u>Women</u>	<u>Totals</u>
White	1058	1037	2095/85.7%
Black	116	87	302/8.3%
Hispanic	27	41	68/2.8%
Asian/Pacific Island	30	28	58/2.4%
American Indian	7	14	21/.9%

$$\chi^2 = 9.246 \text{ N.S.}$$

A Chi Square done over the full-time workers was found to be significant while one done over the part-time workers was not. The major source of difference appears to be sex. Over 60% of the full-time workers are men while the male/female breakdown for the part-time workers is approximately the same. This difference appears to be primarily due to different patterns of White females and males. The White full-time workers are 61.6% male while White men are only 50.5% of the part-time workers.

The proportion of minority group members does not seem to be particularly different in full and part-time employment and appears to be quite low in both instances. Blacks, over 11% of the population are less than 8% of the research professionals as defined by the SER respondents. The statistics for Hispanics are even more disturbing with only 2.5% of educational research professionals being classified as Hispanic. Asian/Pacific Islanders constitute 2.1% of the professionals and American Indians .5%.

When the ethnic background and sex of employees are examined in terms of organizational type, the profit and nonprofit non-teaching organizations appear to be the most equitable, particularly in terms of ethnic background. Almost 25% of their employees are minority group members compared to 10.7% of the academic sector and 17% of the public education sector employees.

A somewhat different pattern occurs with breakdowns by sex. Public education, with its long tradition of women's involvement, has an almost 50/50 split between women and men professionals. Profit and nonprofit nonteaching organizations are second with 56% men and 44% women. Organizations from the academic sector have the smallest proportion of women RDD and E professionals (40%).

When the number of women and men in the four job levels is examined, it becomes apparent that the men are clustered in the top two levels (men = 66.4% vs. women = 30.9%) while women are found in the bottom two levels (women = 59.1% vs. men = 35.6%). The discrepancy is greatest at Level A (Deans, Administrative Directors, Professors). Thirty-six point six percent of the men were found at Level A compared to 16.3% of the women. A similar pattern occurs when the job levels are broken down by ethnic background. Blacks, for example, hold 6% of the total jobs but only 3.3% of the level A jobs and 8.5% of the lowest level (level D) jobs. This occurs as well for Hispanics and Asian/Pacific Islanders. It is not the case with American Indians, who as less than .6 of the professionals hold .6% of the Level A jobs.

Within minority groups, as well as within the majority group, the pattern of men being clustered at the upper levels and women at the lower levels continues. Fifty-eight percent of the Black men are in the top two levels compared to 33% of the Black women. Thirty-nine percent of Hispanic men are in the top two levels while 22% of the women are. Asian/Pacific Islanders and American Indians reflect this pattern as well.

Table 9

RDD and E Job Levels by Ethnic Background and Sex

	<u>MEN</u>				
	<u>White</u>	<u>Black</u>	<u>Hispanic</u>	<u>Asian/Pacific Islander</u>	<u>American Indian</u>
Level A	1590	51	13	10	9
Level B	1250	77	18	16	4
Level C	894	58	26	15	6
Level D	463	35	22	12	5
	<u>WOMEN</u>				
	<u>White</u>	<u>Black</u>	<u>Hispanic</u>	<u>Asian/Pacific Islander</u>	<u>American Indian</u>
Level A	410	18	7	3	3
Level B	582	53	12	15	1
Level C	726	70	26	18	5
Level D	612	75	39	19	6

An examination of the data from the responding organizations, indicates that the majority of RDD and E professionals are White men (57.7%) and that within the pool of researchers, White men are disproportionately more apt to be full-time and to be in the higher job levels. White women, more than any other group are likely to be part-time workers. Within the majority and minority groups, men are more apt than women to be in the higher level

levels. Profit and nonprofit, nonteaching institutions appear to be the most equitable by ethnic background while organizations in the public education sector appear to be the most equitable by sex. Academic organizations are the least equitable by both ethnic background and sex.

The population of educational researchers, as represented by this survey, is not representative of the general population by sex and ethnic background. It is beyond the scope of this survey to determine the reasons for this difference. It is reasonable, however, to hypothesize that the ethnic background and sex differences of researchers working for organizations receiving a large percentage of their funds from the federal government will be more representative of the general population than are other organizations. For a number of years the federal government has been concerned with educational equity. Federal laws prohibit sex and race discrimination in organizations receiving federal funds. It is reasonable to assume that federal efforts in this area have had some effect and that minorities and women would be more likely to be found in institutions who relied on the federal government for a large proportion of their RDD and E funds.

An analysis of the responding organizations found that 17% of the people involved in RDD and E are employed by organizations receiving no federal funds, 31% by those receiving between 1 to 24% Federal funds, 31% by those receiving 25-74% and 20% by those receiving over 75% of their RDD and E funds from federal sources.

As Table 10 indicates the patterns of employment by sex and ethnic background significantly differ based on the amount of federal funding an organization receives. The difference appears to be by sex, that women are more than apt than men to be employed by organizations who receive more than 75% of their funds from the federal government.

Table 10
Sex of RDD and E Full and Part-time Staff
(By percent of Federal Funds)

	<u>Men</u>	<u>Women</u>
No Federal Funds	955/18	619/16%
1-24% Federal funds	1668/32%	1169/30.5%
25-75% Federal funds	1692/32.5%	1135/29.5%
75-100% Federal funds	894/17%	932/24%

$\chi^2 = 71.48$

$p < .0001$

A more complex pattern occurs when sex and ethnic background differences are examined. As Table 11 indicates the patterns of employment of minority and majority women and minority and majority men differ significantly by the percentage of federal funds received by the organization.

Table 11
Sex and Ethnic Background of RDD and E Staff
(By percent of federal funds)

	<u>Men</u>				
	White	Black	Hispanic	Asian/Pacific Islander	American Indian
No Federal Funds	812/17.5	37/11%	11/11%	15/17%	5/25%
1-24% Federal Funds	1490/31%	95/28%	35/35%	23/26%	6/30%
25-74% Federal Funds	1554/29%	118/35%	28/28%	32/36%	4/20%
75-100% Federal Funds	775/24%	89/26%	26/26%	19/21%	5/25%
	$\chi^2 = 72.55$				
	p .0001				
	<u>Women</u>				
	White	Black	Hispanic	Asian/Pacific Islander	American Indian
No Federal Funds	530/16%	37/11%	10/8%	31/32%	2/7.7%
1-24% Federal Funds	1004/31%	95/28%	42/34%	21/22%	7/87%
25-74% Federal Funds	940/27%	118/35%	34/27/5%	33/34%	10/38%
75-100% Federal Funds	787/24%	89/26%	37/30%	121.2%	7/27%
	$\chi^2 = 58.67$				
	p < .0001				

With the exception of Asian/Pacific Islanders, White women are more apt than other groups to be in organizations with no federal funds and are slightly less apt to be in organizations with 75% or more federal RDD and E funds. The patterns of minority and majority men are not as consistent. The percentage of Asian men in organizations with no federal funding is almost twice as high as the percentage of White men, however the lowest percentage of White males is in the 75-100% federal funding category. In general, the percentage of federal funding seems to be more closely tied to the percentages of women professionals in an organization rather than to the percentage of minority people.

A similar analysis was done to compare the sex and ethnic background breakdown of RDD and E professionals by the percentage of public funds (state, federal and local) received. The results, however, indicate that less than 10% of the professionals work for institutions receiving less than 25% of their research funds from public sources. Over 77% of the professionals work in organizations receiving at least 75% of their RDD and E funding from public sources. This distribution made an analysis by sex and ethnic background unfeasible, however it is an indicant of the great role that public funding is playing in educational RDD and E. Severe cuts in public funding have the potential to eliminate most of the RDD and E jobs represented in this survey and to devastate educational research.

IV. Individual Survey Results

A total of 1932 individual surveys were mailed to a sample of active members of the American Educational Research Association. The sample was composed of 500 White female members, 500 White male members and all of the minority group members (408 Blacks, 229 Hispanics, 207 Asians and 51 American Indians). From the initial mailing and a follow-up postcard, a total of 863 responses were received for an overall response rate of 44.7%. The response rate varied by ethnic group ranging from a high of 50.8% for Whites to a low of 33% for American Indians. The response rate for the other groups was Hispanics 42.4%, Blacks 36.2% and Asian/Pacific Islanders 34.3%.

The individual questionnaire focused on five distinct areas: background, education, employment, professional activities and individual perceptions of inequitable treatment. In this chapter summary results by each area will be given as well as overall results.

BACKGROUND

The respondents come from varied backgrounds. Table 12 gives a breakdown by ethnic background and sex.

Table 12

Breakdown of Individual Survey Sample Members
by Ethnic Background and Sex*

	Men	Women	Total
White	253	255	508
Black	74	74	148
Hispanic	49	48	97
Asian/Pacific Islander	42	29	71
American Indian	12	5	17
	<u>430</u>	<u>411</u>	<u>841</u>

*Twenty-two respondents did not indicate their race and/or sex

Hispanics were originally broken into four subgroups, however because of the small number in each group (Cuban-9, Puerto Rican-19, Mexican-American-44, Other Hispanic-25), it was decided to collapse them into the general category, Hispanic.

Women, on the other hand were more apt than men to rely on personal savings (7.2% vs. 1.6%). Somewhat surprisingly, slightly over one third of both women and men list fellowships as a primary funding source of their graduate education. This is not the case by ethnic background. Whites (28%) were less apt than Blacks (38%), Hispanics (48%), Asian/Pacific Islanders (39%) and American Indians (53%) to have used fellowships as a primary source of graduate education funding.

Analysis by ethnic background and sex found some interactions. For example of all the groups, Asian/Pacific Island women were the most apt to rely on loans for funding (13.8%) while Asian/Pacific Island men were the least apt (2.4%). More White women than White men (6.7% vs. 4%), equal percentages of Black women and men (9%) and more Hispanic men than women (6.1% vs. 4.3%) were apt to use loans as primary sources of funding. There are few other ethnic background/sex differences except in the GI Bill where Hispanic men (4.1%) were the least apt of the men to have used the GI Bill and Hispanic women (2.1%) were the most apt of the women to have used it.

While there are differences by ethnic background and sex in terms of degrees attained and how they were financed, there are not comparable differences in the allocation of teaching assistantships. Slightly over 50% of the women and men indicated that they had had teaching assistantships. Between 54-58% of Whites, Hispanics, Asian/Pacific Islanders and American Indians received teaching assistantships while only 42% of Blacks did. Within ethnic groups, approximately the same percentages of women and men received teaching assistantships.

The pattern is different for research assistantships. Men are significantly more apt than women to have had research assistantships (66% vs. 59%, $\chi^2 = 4.266$, $p < .05$). Once women and men received the assistantship, the work that they did was similar, with field work and statistical analysis being the tasks most frequently mentioned.

When "receiving a research assistantship" is examined by ethnic background, a significant difference is found ($\chi^2 = 18.103$, $p < .005$). Blacks are the least apt to have had research assistantships (53.7%) and Asian/Pacific Islanders are the most (80%). Whites are in the middle with 63% receiving research assistantships. Across ethnic groups the tasks being done for research assistantships were similar with field work and statistical analysis being mentioned most often. Breaking down the information on research assistantships by ethnic background and sex, it was found that while more Hispanic women than Hispanic men held research assistantships (66.7% vs. 61.2%) the reverse was true for all other groups.

Less than half of the Black, White and American Indian women had received research assistantships during their graduate education.

The final question in the education section asked respondents to indicate if a faculty or staff member had taken a special interest in them as graduate students. Although over 75% of the respondents indicated that they had had a mentor, men (81%) are significantly more apt than women (71%) to have had a mentor ($\chi^2 = 12.32, p < .001$). Significant differences were not found by ethnic background, although Hispanics (62%) were the only group reporting less than 75% of its members having a mentor. In all of the ethnic groups, men are more apt than women to have had a mentor. The difference was smallest for Whites (5.7%) and Blacks (8.8%) and quite a bit larger for Hispanics (23%), Asian/Pacific Islanders (31.9%) and American Indians (40%).

EMPLOYMENT

In this section, respondents were asked to indicate where they are currently employed, what percent of their time is spent on various professional tasks, sources of their salaries and their RDD and E funds and finally the amount of their salaries. A majority of the respondents come from universities (52%). There was no significant difference found by ethnic background ($\chi^2 = 85.21, p < .005$). Whites are most apt to be found in universities (56%) while Blacks (44%) and American Indians (24%) are the most apt to be found in nonprofit organizations. This finding reinforces the institutional survey finding that nonprofit, nonteaching organizations are most apt to employ minorities in professional research positions. Blacks are also the groups most apt to be found in the public schools (18.8%).

Perhaps because almost 20% of Blacks are employed by the public schools, they are the group least apt to be on so called "soft money" (funds which are not part of an institution's regular budget). Less than $\frac{1}{4}$ of the Black respondents (24.5%) are on soft money compared to 30% of Whites, 46% of Hispanics, 36% of Asian/Pacific Islanders and 47% of American Indians. ($\chi^2 = 26.98, p < .001$). Women (31%) are significantly more apt than men (24%) to be on soft money ($\chi^2 = 7.71, p < .05$). A significantly higher percent of women's time (26%) than men's (18%) was found to be covered by soft money ($F=8.67, p < .005$). Significant differences by ethnic background and a significant interaction by ethnic background and sex were also found. As Table 13 indicates Hispanics and American Indians have the highest percent of time on soft money. The biggest within ethnic group differences are found between White men and women (15% vs. 28%) and American Indian men and women (19% vs. 50%).

Table 13
Percent of Salary on Soft Money

	Men	Women
Whites	18%	28%
Blacks	15%	15%
Hispanics	13%	31%
Asian/Pacific Island	26%	26%
American Indian	19%	50%
Total	18%	26%

When respondents were asked to indicate how their work time is spent, little differences by ethnic background or sex appear. No significant differences were found in time spent on research, development, dissemination, evaluation, policy studies, administration or teaching. There are some trends with women appearing to spend more time in evaluation than men ($p=.066$) and less time in policy studies ($p=.057$). Also Whites spend more time in administration than others ($p=.066$) however there were no significant differences or significant ethnic background/sex interactions.

Table 14
How Researchers Spend Their Time

Activity	Men	Women	Total
Research	17%	18%	17.6%
Development	7%	6%	6.7%
Dissemination	4%	4%	4%
Evaluation	7.5%	10%	8.8%
Policy Studies	3%	1.5%	2.2%
Administration or Management	20.5%	17.5%	19%
Teaching or Training	22%	24%	23%

Similarly few differences were found in sources of funding. The federal government was reported as the highest source of funds providing 27.5% of the funds used for research. Other funding sources listed include:

State Government	8.8%
Local Government	2.4%
Industry	1.2%
Foundations	3.3%
Employing Institutions Funds	12.8%
Employing Institutions Resources	4.1%
Personal Funds	5.6%

These findings reflect the institutional survey in terms of percentages of federal, foundation and corporate funding. However institutions reported more of their funds coming from state and local governments. This discrepancy may be explained if the percentages that individuals attributed to institutional support were, in reality, coming to the institution through state and local governments.

Information on respondent salaries from employment and related professional activities during the past year was also collected. Somewhat surprisingly Blacks have the highest percentage of respondents making more than \$40,000 (47.9%) followed by Whites (38.4%), American Indians (37.6%), Hispanics (25.3%) and Asian/Pacific Islanders (20.9%). Blacks (4.9%) and Whites (5%) are the only groups having any members making \$50,000 or more a year. In each ethnic group, women are more apt than men to be clustered at the lower salary levels (below \$24,000) while men are more apt to be at the higher levels (\$24,000 or above). The differences by sex ($\chi^2 = 74.71$ $p < .001$) and by ethnic background ($\chi^2 = 45.95$, $p < .025$) were significant with men consistently making more money than women, regardless of ethnic background. The differences by ethnic background were more complex. Table 15 provides the complete figures.

Table 15 -

		Salaries in Educational Research by Sex and Ethnic Background							
		8,0000	8000- 12999	13000- 17999	18000- 23999	24000- 29999	30000- 39999	40000- 49999	50000
White									
Men	10	6	12	37	53	67	46	19	
Women	29	15	30	54	46	46	8	6	
Black									
Men	5	1	2	10	14	26	10	5	
Women	8	0	5	17	13	21	5	2	
Hispanic									
Men	5	0	5	9	14	13	3	0	
Women	9	3	5	11	10	6	2	0	
Asian/PI									
Men	2	1	4	11	11	9	3	0	
Women	3	3	3	12	3	1	1	0	
Am. Indian									
Men	0	0	0	2	5	4	1	0	
Women	1	0	0	2	0	1	0	0	

Questions in this section focused on professional activities (i.e. reviewing, consultancies), productivity, (i.e. articles, books) and professional rewards or "perks" (i.e. released time for professional activities, special leaves). The extent to which minority and/or gender concerns surfaced in work was also requested.

Respondents were asked to indicate the number of times they had participated in each of the following activities; paid consultancies, proposal reviewing for federal agencies and foundations, reviewing or acting as an editorial board member for a professional organization, serving as an editor or an associate editor for a professional organization, holding office in a professional organization, holding committee membership or giving an invited or keynote address at the professional meeting of a national organization. Table 16 gives a summary of the responses by sex and ethnic background.

Table 16

Number of Professional Activities by Sex and Ethnic Background

	Men				
	White	Black	Hispanic	Asian/ Pacific Island	American Indian
Paid Consultancies	5.2	2.8	2.3	3.1	8.9
Proposal Reviewing for Federal Agencies and Foundations	1.7	.6	2.0	1.9	3.2
Editorial Board Member	1.2	.7	.4	.4	.4
Editor/Associate Editor	.2	.5	.1	.2	.2
Office Holder	.6	1.1	.4	.3	.9
Committee Member	1.1	1.0	.4	.4	1.0
Invited or Keynote Address Presentor	1.4	1.9	.6	.2	.4
	Women				
Paid Consultancies	2.7	1.5	1.3	1.4	2.5
Proposal Reviewing for Federal Agencies and Foundations	1.0	.9	.5	.4	2.0
Editorial Board Member	.9	.3	.3	.2	.4
Editor/Associate Editor	.1	.1	.2	.0	.0
Office Holder	.7	.4	.4	.2	.6
Committee Member	.9	.6	.7	.6	1.3
Invited or Keynote Address Presentor	.6	.7	.7	.5	.6

Two ways analyses of variance by sex and ethnic background, were done over the seven activities listed. Significant differences, by sex were found in the number of paid consultancies ($F=10.9$, $p < .001$) the number of editorships ($F = 4, 9$, $p < .05$) and the number of invitations to speak at national professional meetings ($F=4.1$, $p < .05$). In each of these areas men have had significantly more activities than have women. Significant differences by ethnic background appeared only in number of paid consultancies ($F = 2.7$, $p < .05$) although differences approaching significance were found in the number of editorial board memberships ($p=.055$) and in the number of organizational committee memberships ($p=.051$). Post hoc analysis over the number of paid consultancies found American Indians and Whites having significantly more paid consultancies than Blacks or Hispanics. No significant interactions, by ethnic background or sex were found across any of the measures of professional activity. Neither were differences by sex or ethnic background found in proposal reviewing for foundations or federal agencies or in holding offices for professional organizations.

Table 17 gives a summary of the F tests over professional activities.

Table 17

F Test Results for Number of Professional Activities by Sex and Ethnic Background

	Sex	Ethnic Background	Sex by Ethnic Background
Paid Consultancies	10.9**	2.68*	.32
Proposal Reviewing for Federal Agencies. Foundations	2.5	.48	.33
Editorial Board Member	1.46	2.33	.07
Editor/Associate Editor	4.0*	.68	.92
Office Holder	.45	1.17	1.05
Committee Member	1.67	2.36	.82
Invited or Keynote Address Presenter	4.1*	.75	.34

* $p < .05$

** $p < .001$

Information on the number of different types of professional products that respondents have developed was asked as well. The types of products listed were: articles in referred journals, articles in non-referred journals, books and book chapters, paper presentations, funded proposals, unpublished submitted manuscripts and unfunded submitted proposals. Table 18 gives a summary of responses by ethnic background and sex.

Table 18

Number of Professional Products by Sex and Ethnic Background

	Men				
	White	Black	Hispanic	Asian/ Pacific Island	American Indian
Articles in Refereed Journals	7.7	3.6	.83	3.1	1.2
Articles in Non-refereed Journals	4.3	1.9	1.0	2.3	1.9
Books and Book Chapters	2.5	.7	.8	.9	.9
Paper Presentations	8.1	4.3	3.3	5.7	5.8
Funded Proposals	3.4	1.5	1.1	2.3	3.0
Unpublished Submitted Manuscripts	2.2	1.3	.6	1.8	1.1
Unfunded Submitted Proposals	2.9	1.7	1.1	1.7	1.2
	Women				
Articles in Refereed Journals	2.5	1.0	1.0	.5	2.6
Articles in Non-refereed Journals	1.8	.8	.7	.9	1.2
Books and Book Chapters	1.1	.7	1.1	.6	.8
Paper Presentations	6.3	2.5	3.1	3.9	9.0
Funded Proposals	2.1	1.6	.6	1.6	1.2
Unpublished Submitted Manuscripts	1.3	.7	.7	.6	1.6
Unfunded Submitted Proposals	2.0	.8	.7	.4	1.6

Two way analyses of variance by sex and ethnic background were done over the seven product types listed. As with the professional activities, no significant interactions by ethnic background or sex were found. However, significant differences by ethnic background and sex were found. On the average, men have had significantly more professional products than women in six of the seven areas (differences approached significance, $p = .06$) in the seventh area, paper presentations). Significant differences, by ethnic background were found in five of the seven areas, articles in referred journals, articles in non-referred journals, paper presentations unfunded proposals and unpublished manuscripts. Differences approaching significance, by ethnic background, were found in numbers of funded proposals ($p = .054$).

Table 19 gives a summary of the F tests over professional products.

Table 19

F Test Results for Number of Professional Products by Sex and Ethnic Background

	Sex	Ethnic Background	Sex by Ethnic Background
Articles in Referred Journals	27.3**	5.4**	1.85
Articles in Non-refereed Journals	13.42**	2.92*	.62
Books and Book Chapters	5.5*	1.94	.92
Paper Presentations	3.49	4.7**	.24
Funded Proposals	3.84*	2.34	.347
Unpublished Submitted Manuscripts	6.33*	2.52*	.516
Unfunded Submitted Proposals	4.44*	2.8*	.09

* $p < .05$

** $p < .001$

Unlike the questions on professional activities and professional products, participants were not asked to indicate the number of professional rewards they had received. Rather they were asked to indicate if they had ever received any of ten professional rewards including such items as released time, seed money and research assistants. Table 20 gives a summary of the results by sex and ethnic background.

Table 20

Achievement of Professional Rewards by Sex and Ethnic Background

	White	Men Black	Hispanic	Asian/ Pacific Island	American Indian
Released Time for Unfunded Research	74	12	8	5	4
Released Time for Outside Professional Activities	42	14	4	9	4
Released Time for Training	57	21	9	9	3
Seed Money	85	16	10	8	4
Research Assistants	71	15	11	9	2
Sabbaticals	62	11	5	4	1
Summer Fellowships	30	7	6	4	1
Special Leaves	40	11	6	2	1
Named Professorships	3	2	0	0	0
Institution Honors	68	20 Women	11	12	5
Released Time for Unfunded Research	45	7	5	4	0
Released Time for Outside Professional Activities	40	11	8	3	0
Released Time for Training	51	14	10	7	1
Seed Money	52	11	12	6	0
Research Assistants	49	3	11	4	1
Sabbaticals	31	6	6	0	0
Summer Fellowships	21	6	6	5	2
Special Leaves	38	9	9	5	1
Named Professorships	2	0	1	0	0
Institution Honors	61	6	10	3	1

In order to do further analysis, three weighted sums were developed, one for professional activity, one for professional products and one for professional rewards. The professional activity sum was the sum of the number of paid consultancies, proposal reviewing, additional board memberships and committee memberships plus twice the number of editorships, professional offices held and national invited addresses given. Editorships, offices and addresses were counted twice because of both their high status as activities and the relatively small number of researchers who are able to achieve them. An analysis of variance, by sex and ethnic background over the activities sum found a significant difference by sex ($F=10.7$, $p<.001$) but not by ethnic background. ($P=11$). Men had a significantly higher sum than women. American Indians had the highest sum followed by Blacks, Whites, Asian/Pacific Islanders and Hispanics, but the differences were not significant.

A similar sum was calculated for professional productivity. The sum was composed of the number of articles in non-referred journals, the number of paper presentations and the number of funded proposals plus twice the number of articles in referred journals and three times the number of books or book chapters. Heavier weights were given to articles in referred journals and book chapters because of the greater respect in which they are held as research products. An analysis of variance, by sex and ethnic background done over the products sum, found significant differences by sex ($F=19.5$, $p .001$) and ethnic background ($F=6.0$, $p .001$). Men had a higher sum than did women. Post hoc analysis found Whites significantly higher than the other ethnic groups followed by Blacks, Asian/Pacific Islanders, American Indians and Hispanics.

The third sum focused on professional rewards and was sum of the number of different types of professional rewards (ie. released time, seed money) respondents indicated receiving. An analysis of variance, by sex and ethnic background, found significant differences by sex ($F=18.9$, $p<.001$) and ethnic background ($F=3.2$), $p<.05$). Significantly, more men than women received different types of professional rewards, while Hispanics and American Indians were least apt to receive professional rewards.

When Chi Squares, by sex, were done over the ten categories, significant differences were found in released time for unfunded research ($\chi^2=9.1$, $p<.001$), seed money ($\chi^2=7.4$, $p<.005$), research assistants ($\chi^2=9.1$, $p<.005$), sabbaticals ($\chi^2=14.3$, $p<.001$) and within institution honors ($\chi^2=5.5$, $p<.05$). In each of these categories a greater number of men than women have received the reward. It is interesting to note that significant differences were found in those areas related to research (money, released time and assistants) but not in those related to training and professional activities. As indicated previously, there are few differences between women and men

in professional activities, while there are great differences in the professional products, which are frequently the results of research. It appears that men produce more professional products than do women and also have more of the supports that are both rewards for production and facilitators for further production, than do women.

Chi Squares, by ethnic background, had somewhat similar results. Significant differences were found in numbers of respondents who had received released time for unfunded research ($\chi^2=11.9$, $p < .01$), research assistants ($\chi^2 = 10.1$, $p < .05$), and sabbaticals ($\chi^2=13.8$, $p < .01$). Whites are more apt to have received time for research and sabbaticals than other groups. Blacks are least apt to have research assistants than were other groups. There are no significant differences across the other seven reward areas, even though there are significant differences by ethnic background across five of the seven categories of professional products.

Finally, respondents were asked to indicate the role that minority and/or gender concerns played in their work. As might be expected, participants differed significantly, by ethnic background, in the amount of research that they did that focused solely on minority issues. ($F=51.07$, $p < .0001$). Over half (54.6%) of the Hispanics regularly do research dealing solely with minorities while 32.2% of Blacks, 70.6% of American Indians and 22.2% of Asian/Pacific Islanders and 8.5% of the Whites do. Whites have the highest percentage of those who never do research dealing solely with minority issues (48.6%) followed by Asian/Pacific Islanders (30.6%). The other minority groups had between 11-12% who never do research dealing solely with minority issues. There were no significant differences between women and men doing research in this area and no interaction by ethnic background and sex.

A different pattern appeared when a similar question was asked about research related solely to gender issues. As expected women were significantly more apt than men to do this research regularly ($F=6.3$, $p < .012$). However, only 9.2% of women and 3.5% of men do work in this area regularly. Almost half of the men (46.2%) and women (42.7%) never do work in this area. Somewhat surprisingly there is a significant difference by ethnic background ($F=6.00$, $p < .001$) with minorities (with the exception of Asian/Pacific Islanders) being more apt than Whites to do research dealing solely with gender issues. Five percent of Whites, 7.4% of Blacks, 13.4% of Hispanics, 2.8% of Asian/Pacific Islanders and 11.8% of American Indians regularly do work in this area. Again, with the exception of Asian/Pacific Islanders, Whites were the most apt never to have done work in the area.

Questions dealing with the extent minority or gender-based concerns were included in one's research had similar results. There were significant differences by ethnic background ($F=29.00$, $p<.0001$) but not by sex or in the interaction of ethnic background and sex, in the extent to which respondents considered minority issues in their work. Twenty-six percent of the Whites, 58.4% of Blacks, 70.1% of Hispanics, 37.5% of Asian Pacific Islanders and 82.4% of American Indians regularly include minority concerns in their research.

Women ($F=10.1$, $p<.002$) and minorities ($F=6.45$, $p<.001$) were found to be significantly more apt to deal with gender-based issues in their research. Sixteen point nine percent of men and 24.6% of women regularly deal with these issues in their research. Again with the exception of Asian/Pacific Islanders, minorities are more apt than Whites, with no significant race and sex interaction, to deal with gender issues in their research. Nineteen point seven percent of Whites, 20.1% of Blacks, 33% of Hispanics, 6.9% of Asian/Pacific Islanders and 29.4% of American Indians reported that they regularly deal with gender issues in their research.

It appears that ethnic background is a major determining factor in who does research dealing solely or even in part with minority issues but that ethnic background and sex are major factors in who does gender based research. Whites and Asian/Pacific Islanders are the least apt to work either in areas while women are the most apt to do gender research and equally apt with men to do research in minority areas.

DISCRIMINATION

In the final area to be discussed in the individual survey, respondents were asked to indicate the affects that they felt spouses and families might have had on their careers. They were also asked to indicate any of seven areas in their graduate education or seven areas in their employment in which they might have received either positive or negative inequitable treatment because of ethnic background, gender, physical disability, sexual preference, marital status, religion or age.

When respondents were asked to indicate how they felt having children had affected their careers, women and men were significantly different in their responses ($\chi^2=58.1$, $p < .001$). Although a majority of the women (53%) and the men (62%) feel that child care had had no affect on their careers, women are more apt than men to say that the affect that children had was negative. Since, in many families child care is still considered primarily the woman's responsibility, this is not surprising. Six respondents, all women, did indicate on the questionnaire, they felt the positive value of the children, and of staying home with them, outweighed the negative affects on their careers.

When responses to this question were examined by ethnic background and sex, some differences were found. There are no differences between minority and majority women in the ways that they answered the question, with most of those who thought children had an affect on their careers viewing it as a negative one. There were however, significant differences, by ethnic background, across the men ($\chi^2=26.89$, $p < .05$). The major differences across the men appeared to be that White men, more than other men, view children as having a negative affect on their careers. Eighteen point four percent of White men view child care as having a minor or major negative affect on their careers compared to 10.8% of Blacks, 12.5% of Hispanics, 16.7% of Asian/Pacific Islanders and 9.1% of American Indians.

A somewhat similar pattern was found in response to questions about spouses' affects on respondents' academic preparation for careers, beginning years of their careers and current career. Women were significantly more apt than men ($\chi^2=40.48$, $p < .0001$) to see their spouse's job as having a negative affect on their own academic preparation. Twenty two percent of the women, compared to 4% of the men saw their spouse's job negatively affecting their own education. No significant differences by ethnic background or interactions were found.

When respondents were asked to indicate the affect of a spouse's job on the respondent's early career, again women were significantly more apt than men to see the affect as negative ($\chi^2=61.9$, $p < .0001$). Thirty percent of the women think

their husbands' jobs had negative affects compared to 7% of the men. There were no significant differences in the responses of minority and majority women ($p=.67$) while the differences in the responses of minority and majority men approached significance ($\chi^2=29.53$, $p=.078$). Hispanic and American Indian men seem even more apt than other men to see their wives' jobs as having a positive affect on the men's careers. When asked about how their spouses' jobs affected their current career, again the women were significantly more negative than the men ($\chi^2=40.65$), $p < .0001$) with 16% of the women and 8% of the men seeing their spouses' jobs as having negative affects on their own careers. There were no significant differences between minority and majority women ($p=.23$) but there were significant differences by ethnic background, for the men ($\chi^2=30.17$, $p < .05$). Black, Hispanic and American Indian men appeared to be more apt to see their spouses' jobs as having positive affects on the men's careers.

It is interesting to note that in responses to questions about the affects of family on academic preparation and careers, significant differences by ethnic background were not found while significant differences by sex were found for each question. When these differences were further explored, it was found that no significant differences were found between minority and majority women, while in two of the four questions, significant differences were found between majority and minority men.

The individual survey, in perhaps its most important question, asked respondents to indicate areas in employment and education, in which they might have been treated inequitably by ethnic background, gender, physical disability, marital status, religion or age. Respondents were also asked to indicate if the inequitable treatment they received was positive or negative in nature.

Both positive and negative inequitable treatment was found in all categories (ethnic background, gender, physical disability, sexual preference, marital status, religion and age), although most of the instances of inequitable treatment were found in the gender and ethnic background categories. Table 21 summarized the number of times positive and negative inequitable treatments were mentioned.

Being selected for a job because of one's sex or being admitted to a program with less stringent admission criteria because of one's age would be considered examples of positive inequitable treatment. Being denied tenure because, in part, of one's ethnic background or receiving a smaller salary increment because of one's marital status would be examples of negative inequitable treatment.

Table 21
Reported Instances of Inequitable Treatment Reported

	Positive Inequitable Treatment Graduate Education Employment		Negative Inequitable Treatment Graduate Education Employment	
Ethnic Background	189	141	227	417
Gender	72	96	163	467
Physical Disability	2	0	3	5
Sexual Preference	8	12	20	46
Marital Status	23	14	60	76
Religion	8	8	15	14
Age	<u>48</u>	<u>19</u>	<u>61</u>	<u>95</u>
	350	290	549	1120

Table 22

Instances of Inequitable Treatment in
Employment and Graduate Education

	Positive Inequitable Treatment	Negative Inequitable Negative Inequitable Treatment
GRADUATE EDUCATION		
Academic Requirements	47	72
Admissions	78	92
Assistantships	60	79
Financial Aid	47	72
Housing	25	50
Professor/Student Relationships	85	158
Other	<u>8</u>	<u>26</u>
	350	549
EMPLOYMENT		
Allocation of Supportive Services	19	13
Collegial Relationships	58	188
Hiring	111	211
Promotion	34	240
Retention	21	96
Salaries	39	254
Other	<u>8</u>	<u>18</u>
Total	290	1120

The two major areas of positive inequitable treatment in graduate education were in admissions and professor/student relationships. Interestingly these were the two major areas of negative inequitable treatment as well. Admissions are, of course, covered by anti-discrimination laws and court cases, professor/student relationships are not. In employment, hiring is the major area of positive inequitable treatment while salaries, promotion and hiring are the major areas of negative inequitable treatment. Further analysis was done to determine who indicated they had experienced inequitable treatment because of ethnic background and/or gender. Using sex, ethnic background and number of years since receiving terminal degree as independent variables, 3 way Analysis of Variances were conducted over the number of times inequitable treatment was indicated.

As might be expected, women were significantly more apt than men to have indicated they experienced negative inequitable treatment in employment and in graduate education. They also were more apt to indicate they had experienced positive inequitable treatment in employment. There were no significant differences by sex in positive treatment in graduate education. No significant differences by ethnic background, years since receiving the degree or in any interactions of the three variables were found. Women, regardless of ethnic background or year of final degree, are more apt to see themselves as the recipients of inequitable treatment because of their sex than are men.

Table 23

Instances of Inequitable Treatment by Gender

	<u>Men</u>		<u>Women</u>		F
	\bar{x}	s.d	\bar{x}	s.d	
Positive Inequitable Treatment in Employment	.07	.44	.14	.45	7.5*
Negative Inequitable Treatment in Employment	.11	.48	1.	1.5	140.6**
Positive Inequitable Treatment in Employment	.05	.32	.1	.4	3.3
Negative Inequitable Treatment in Employment	.04	.34	.35	.82	46.4**

* $p < .005$ ** $p < .0001$

Negative inequitable treatment in employment is most likely to be indicated by women, with on the average there being one complaint per female respondent. It must be remembered, however, that each respondent had the opportunity to indicate negative inequitable treatment in employment in seven categories.

When inequitable treatment because of ethnic background was examined, a more complex pattern was found. Significant main effects by ethnic background were found in all four categories, positive inequitable treatment in employment ($F=16.5$, $p<.0001$), negative inequitable treatment in employment ($F=40$, $p<.0001$), positive inequitable treatment in graduate education ($F=36.4$, $p<.0001$), and negative inequitable treatment in graduate education ($F=31.9$, $p<.0001$). Significant interactions were also found. Significant interactions by ethnic background sex, and year receiving degree were found in instances of negative inequitable treatment in both graduate education ($F=2.79$, $p<.001$) and employment ($F=4.71$, $p<.0001$). Significant interactions by ethnic background and year receiving degree were also found in instances of positive inequitable treatment in graduate education ($F=5.4$, $p<.0001$) and negative inequitable treatment in employment. ($F=2.1$, $p<.036$). Significant interactions by ethnic background and sex was also found in instances of negative treatment in employment ($F=2.37$, $p<.05$).

Table 24 gives a summary of the number of instances of inequitable treatment by ethnic background. Post hoc analysis of the results indicate that Whites, and in most instances, Asian/Pacific Islanders, are less apt to report instances of positive and negative inequitable treatment.

Instances of Inequitable Treatment Based On Ethnic Background

Positive Inequitable Treatment in Employment

	Men		Women	
	X	s.d.	X	s.d.
White	.04	.31	.02	.20
Black	.32	.97	.39	.96
Hispanic	.39	.89	.5	.97
Asian/Pacific Island	.19	.55	.24	.58
American Indian	.5	.9	.2	.44
Total	.16	.62	.16	.60

Negative Inequitable Treatment in Employment

	Men		Women	
	X	s.d.	X	s.d.
White	.14	.56	.05	.33
Black	1.08	1.6	1.25	1.74
Hispanic	.98	1.63	1.15	1.68
Asian/Pacific Island	1.09	1.38	.79	1.52
American Indian	1.0	1.54	.2	.44
Total	1.5	1.17	.46	1.17

Positive Inequitable Treatment in Graduate Education

	Men		Women	
	X	s.d.	X	s.d.
White	.02	.22	.02	.16
Black	.55	1.23	.43	.88
Hispanic	.88	1.29	.60	1.16
Asian/Pacific Island	.23	.58	.03	.19
American Indian	.67	1.15	1.2	.83
Total	.26	.79	.18	.62

Negative Inequitable Treatment in Graduate Education

	Men		Women	
	X	s.d.	X	s.d.
White	.03	.24	.04	.31
Black	.74	1.12	.65	1.01
Hispanic	.78	1.53	.40	.64
Asian/Pacific Island	.40	1.06	.52	1.02
American Indian	.833	1.52	.4	.89
Total	.30	.89	.23	.66

To further explore perceptions of positive and negative inequitable treatment, correlations were done between professional activity, productivity, and reward sums and reported instances of positive and negative inequitable treatment of education, in employment and overall. Although negative correlations between instances of inequitable treatment and professional activities productivity or rewards might be expected, none was found. The only significant correlation ($r = -.07$, $p < .03$), found between productivity and negative inequitable treatment by ethnic background in education, was too small to be meaningful, in both education and employment, were not related to professional activity, productivity or rewards.

Correlations were also done between professional activity, productivity and reward sums and the degree to which respondents felt that children and spouses' jobs negatively or positively affected their careers. Again, although correlations between these areas might be expected, none was found. The perceived affect of children and spouse on an individual's career was not related to professional activity, productivity or reward.

Throughout the individual survey, differences by sex seemed to be greater in number and degree than differences by ethnic background. The general lack of significant interactions indicates that differences by sex are somewhat consistent across ethnic groups. As might be expected, almost independent of measure White men are doing better. Yet individual perceptions of inequitable treatment do not appear to be directly related to such measures of "doing better" as professional activities, productivity or rewards.

V. Telephone Survey Results

A total of 75 telephone interviews were conducted. Each interview lasted from 15 to 60 minutes with the average interview lasting approximately 25 minutes. The interviews focused on interviewees' experience with inequitable treatment in the past five years, how they responded, the effectiveness of their responses, alternative responses and ideas they had for increasing equity for educational researchers.

The interviewees were selected from a group of over 400 who returned a postcard enclosed in the individual survey, indicating that they wished to be interviewed. The 75 were selected in order to include men and women members of each of the ethnic groups. Table 25 gives a summary of the interviewees by sex and ethnic background.

Table 25

Telephone Interviewees by Ethnic Background and Sex

White	14	19
Black	9	8
Hispanic	7	11
Asian/Pacific Island	2	2
American Indian	0	3
	<u>32</u>	<u>43</u>

The interviewees were essentially self selected and the results of their interviews should not be generalized. Since they were told in advance that the interviews would be focusing on individual response to inequitable treatment, respondents may be more apt than others, from the same sex and ethnic backgrounds to have experienced inequitable treatment. However the purpose of the telephone interviews was not to do a quantitative analysis of discrimination, but rather to present a picture how people respond to inequitable treatment and their perception of the effectiveness of their responses.

Seven of the 14 White men interviewed indicated that they felt that they had received inequitable treatment. Two felt that the treatment was positive with one feeling that he had received a job because he was a White man and another feeling that he had gotten promoted faster and had received raises because he was a White man. Five of the men felt that the inequitable treatment that they had received was

negative. Four felt that they had not received jobs because the employer wanted to hire a Black and/or a woman. The fifth felt that he had not received a research award because a woman, who was close to the award administrator, received it twice in a row. The men's response to the inequitable treatment was minimal. Two talked it over with colleagues and one, who felt he was unfairly denied a job, asked for the criteria that were used in the selection process. None of the men felt that their responses were effective. No other action was taken and the men did not have suggestions for other action they might have taken.

As might be expected, a larger number of the White females indicated they had received inequitable treatment. Twelve of the nineteen women felt that they had received negative inequitable treatment, although one also reported an instance of positive treatment. The one positive treatment was male faculty support for an all female student network.

The instances of negative treatment were centered on money issues and on professional support. Six of the women mentioned money and jobs. One received a job offer of \$1500 less than the Black man who had been previously offered the job; one found her entry salary was \$1500 less than a less experienced man hired at the same time and four others indicated that they were not given a raise, a job or an assistantship because the men who received them "needed the money to support their families". Women's responses to these situations were varied ranging from nothing to working together to collect information on female and male salaries and prove that "salary inequity" is real. The three respondents who complained and the one who did nothing found their responses were ineffective. The respondent who is collecting the salary information has not yet completed the project so she does not know its effectiveness. The only response perceived to be effective was to forget about the unfairly lost assistantship and to find one with a supportive woman.

The second area of negative inequitable treatment, professional support, provided a number of examples which were more subtle and potentially more debilitating. The case of a school administrator is an excellent example. She explained that while she was applying for a sabbatical to complete her doctorate, she was told by the assistant superintendent that there was no need for her, a female to get a doctorate and that it would not result in her getting a promotion. The sabbatical was awarded anyway and the woman

received her degree. However, she has never been addressed as Dr. by the assistant superintendent and her title has never been used in any official or unofficial document within the school district. Her response to inequitable treatment, which she found effective, was to get her doctorate, do research and rely on her peers, outside of the school district, for professional support.

Other examples of negative professional support include the woman who was advised when she started a new position as an associate professor not to get active with other women until she received a promotion; the only woman manager in an administrative unit who for three years was not allowed to attend a management institute that the male managers attended, and the woman, who for the past ten years has not been informed of conferences, events and other activities on a regular basis as the male department members have. As with the men, the women's major response was to talk about the treatment with their superiors or with colleagues. And again, those responses were not seen as being effective. One woman believes that while talking works for a while, the inequitable treatment is "not deliberate" but rather "reflects their (men's) basic philosophy" that "women are not equal" and talking doesn't change that.

Unfortunately the women had few suggestions for more effective responses. One woman suggested that she could go to the Chancellor's Committee on Women, another felt that asking for written justification for inequitable practices might be effective, while yet another felt a law suit could be initiated. Three however worried that taking any action would have negative effects on their jobs and their causes.

The nine Black men who were interviewed gave careers no examples of positive inequitable treatment, but seven of them felt they had experienced negative treatment. Unlike the White women, their examples focus almost totally on jobs and money with less emphasis on professional support. The included three men who felt their job performance was rated lower and therefore their raises were lower because of their race. It is interesting to note, however that two of the three were making the highest salaries in their department at the time of the incident.

In a similar vein, another man felt that he was paid less and excluded from committees because of his African background. In slightly different areas, one man felt his federal grant application was not fairly reviewed because he was Black and the study dealt with Blacks. Another respondent indicated problems with grants, however these problems were within his own institution. He received a

grant to publish the results of a conference on Blacks in Higher Education. The man's request for released time or a sabbatical was refused and when he complained, the institution took some of his funding away.

Finally, in a quite blatant example, one man indicated that during the promotion process he discovered that some of his documents were missing. His attempts to replace the missing papers were not allowed. This man has filed a yet unresolved grievance so he does not know the effectiveness of his action. Most of the others responded in the same ways described earlier. Four discussed the situation with a superior and one wrote a letter. None of the five felt that their actions were effective.

The men did suggest other possible alternatives such as going to court, or leaving the job, and in the case of a foreign professional, returning home.

Six of the eight Black women interviewed reported negative instances of inequitable treatment with one reporting a positive instance as well. This woman explained that she was given a promotion without applying because, in her words, she was "Black, female and competent." However the same woman reported that later she was not given a promotion to which she had applied because she was "female and the administration of the school had changed."

With the exception of one woman whose experience was not to be invited back as a federal proposal reviewer because she felt it was based on "who you know", all of the examples mentioned dealt with jobs. One woman did not receive a promotion to head a funded project she had written (the job was given to a White woman) and two others were not reappointed to positions. One of those not reappointed indicated that because she was the only woman and the oldest person in the department, she was expected to do more committee work and teaching than the others. Thus she did not have the time to do the research and publishing that was required for retention.

A final example was given by a woman whose application for promotion to full professor was withdrawn by the department chair because there were three men who needed promotions as well and if her application was included it would make the competition "too rough" for them. Unlike most of the other respondents, this woman undertook a planned series of responses. She first filed complaints with the Dean and the Grievance Committee. When her application was still not submitted she resigned and took another job at a higher salary.

Other respondents to inequitable treatment, by Black women, were not as successful. One woman who was not re-appointed went through the appeals process but was unsuccessful. Three others discussed their problems with supervisors and one with acquaintances, but none of them felt that these responses were effective. No other, possibly more effective, responses were suggested by the women and indeed three of them indicated that their responses were "the only alternatives that they knew."

Seven interviews were conducted with Hispanic men, none of whom indicated examples of positive inequitable treatment. Five however did describe negative inequitable treatment, all of which was related to employment. Three of the instances involved applying for employment. One respondent applied to many institutions but received, he felt because of racism, no jobs or even any interviews. Another found, in a job interview, that his articles, published in Puerto Rico, did not "count" toward employment. The third man, based on an interview for a job for which he is still under consideration, concluded that "when searching for minorities, the university tends to assume that even when a minority person meets the standards, he doesn't have the qualifications."

The respondents also gave examples of negative treatment once they had been employed. As one respondent indicated, "a great deal is expected of minority professionals and they are also expected to excell." An example of this was the man who was given a job in an area in which he had limited expertise. He was given no time to develop expertise and was expected to produce "great things" immediately. His response was to resign the position because he felt that it would have taken too long to change the situation and it would have hampered his professional growth. The only other response to inequitable treatment was one person who spoke to the affirmative action officer with no effect. With one exception, none of the Hispanic men had any suggestions for other possibly more effective responses. The one man who did have an alternative, suggested that first an awareness be created of the pressures being placed on minority members of an organization and if that was not effective, to resort to legal methods.

Interviews were held with eleven Hispanic women. Nine of the women reported instances of negative inequitable treatment with one reporting a positive instance as well (she received a post-doctorate fellowship for minorities and women). The instances of negative inequitable treatment seemed more varied for the Hispanic women than they did for the other groups, covering employment, professional support, promotions, research and salaries. Four women gave examples of instances

where a White person, with fewer qualifications than they had, was promoted or retained over them. For example, after three years in a non-tenure track position, one woman, who brought in \$500,000 in grants during those three years, is being replaced by a young White woman who will be on the tenure track. Another has spent five years teaching out of her area at the request of her chair. Now a new White woman has been given priority in course assignments. In the other two examples, precedence was broken in order to give the acting chair position to a man with less seniority than the respondent and another respondent was part of a management shake up so that the older, more experienced people would not have to report to her, a young, minority woman.

Other examples include a respondent with a Dean who would not meet with her unless her husband (another faculty member) was present; women who felt they were underpaid; women who after going through the interview process lost the job to men who had not gone through the process and women who experienced a general lack of support because of ethnicity.

The Hispanic women's response to inequitable treatment varied as well. One left her job and found a position at a more equitable institution. Another worked hard at her English, proved her professors, who felt that she would not "make it" as a student, wrong and eventually got the assistantship that was denied to her because of her lack of English skills. A third has talked to both affirmative action and grievance committees about not being retained. Her response is still in process but she does not expect it to be successful. The woman who was part of the management shakeup responded by making her division of new employees the "best" division and she is now about to be given greater responsibilities. Two other women did use responses mentioned earlier, talking with superiors about the problem, with mixed success. One felt it made a difference the other not. The women also suggested other possible responses such as engaging in "memo fights", demanding explanations and working through established women faculty groups. More than the other groups, the Hispanic women interviewed appeared to have dealt both creatively and somewhat successfully with negative inequitable treatment.

A total of four Asian/Pacific Islanders were interviewed, two men and two women. Both of the men indicated instances of negative treatment. One felt that because he and his dean were from the same ethnic background, he was subject to denigrating remarks when the dean appointed him to an important search committee. The respondent resigned from the committee to spare the dean embarrassment.

The second man found that even when he was told he was the most qualified, he did not receive the jobs. In his current job he is paid less than a White male counterpart. The respondent has taken no action on either situation. Neither respondent had any suggestions for possible actions that could be taken.

One of the two Asian women interviewed indicated that she had received no inequitable treatment while the other reported both positive and negative treatment. The second respondent was selected for a short term internship at NIE due to her sex and ethnicity. She also, however, was rejected for jobs for which she was qualified, because of sex and/or marital status (she was a new mother). She spoke about her concerns to interviewers but felt that this was not an effective response. She felt that perhaps she could have been more assertive and could have been better prepared to confront discrimination by asking questions and requesting written information.

The final ethnic group participating in the study, American Indian, was represented by three women, (no men volunteered to be interviewed). All three women reported examples of negative inequitable treatment while one had a positive example as well. One woman felt that she had received good support from her doctoral committee and other faculty, however this same woman indicated that no Indian woman had ever been admitted to her university's Ph.D. program in educational administration, all are tracked into the Ed.D. program. She was told that she was turned down for reasons such as: she drove a sports car and wasn't serious about doing research. She did appeal the decision but was unsuccessful. She did however get permission to design an Ed.D. program which incorporated many features of the Ph.D. program.

The second woman indicated that she applied for a new job and as a result had her teaching load at her current job reduced to the same level as all the other members of the department. The final example is from a woman who has a higher title than a man in her office but who makes less money. Her efforts to move to a job where she would be making money equivalent to the man, have been stymied by her superior. She has brought the matter to the Board of Regents but there has been no action. When asked about alternative responses, one woman suggested initiating a lawsuit while a second commented that she could have made a "big stink", however in the past when she has done this she has been labeled as "difficult" and as a "troublemaker."

The interviews did bring out a wide variety of negative inequitable treatments and very few positive examples. The negative treatments focused on employment although some did discuss problems with receiving assistantships. Respondents' reaction to negative inequitable treatment appeared to be with

few exceptions, quite limited and unsuccessful. If respondents took any action at all, it was to discuss the situation with superiors, friends or grievance committees with very little effect. Even when asked for other responses they might have made, respondents had few ideas. It appears that although there has been much discussion of inequitable treatment and discrimination, few seem to be aware of effective strategies for coping effectively with it.

In the last section of the interview, respondents were asked to indicate their ideas for improving equity in educational research. Their responses fell into four major areas. These were suggestions for minorities and women themselves, suggestions for employers, suggestions for professional organizations and suggestions for government.

Suggestions for improving equity were very varied coming from people whose perspectives ranged from those who felt that there were no problems to those who felt that, at this time, equity is dead and efforts to achieve it are futile. Some even questioned the value of suggestions and perceptions, suggesting as one respondent did that "The problem with this equity business is you don't really know if you have got it."

In spite of this concern, a number of suggestions was made, with the first area, suggestions for minorities and women receiving the highest number. The most frequent suggestion, in this area, mentioned by eight respondents, was that minorities and especially women, need to be more assertive. One respondent even felt unsure that there were inequities at all, rather she felt that there was equity but that women had to be more assertive and insistent than they were in the past, refusing to settle for less than men in order to achieve it. Others felt as well that minorities and women needed to be more assertive fighting for their rights, to, as one respondent put it, "always be alert to nip discrimination in the bud when it occurs...especially the subtle remarks" and as another said to "be more demanding. To fight for our causes and stop taking the easy way out."

A second major topic mentioned was training. Respondents felt that minorities and women needed more training in research methods (mentioned by four), leadership skills (three), grant getting (one), public speaking (one), dealing with discrimination (one), building self concept (three), organizational structure (two) and just more training in general (three). As one respondent indicated "sometimes what we perceive as negative inequitable treatment is actually not that at all; very often it is the result of our qualifications - often (we) lack the needed training."

A third topic mentioned was research priorities. Respondents suggested that more research be done on top level administrators and discrimination (one) on minority groups (one), on people's awareness levels (one) and on current problems (one). Respondents also suggested, somewhat obviously, that equity in educational research would be improved if more women were in educational research (two), if more women and minorities were in leadership positions (three) or if they were in more positions controlling funding (one).

Perhaps the most valuable, and difficult to achieve, advice to minorities and women was that they must respect themselves and their ethnicity and be willing to take responsibility for themselves not only as a group but also as individuals.

Suggestions for employers to improve equity were somewhat unrealistic. For example three respondents suggested that stereotypes be eradicated but did not have any suggestions as to how. Two others suggested that positions be opened up to women and nine, in this time of cutbacks, suggested that more be given to graduate students - more research experience, more money, more counselling, more opportunities and more experiences. Perceptions of the role of institutions in achieving equity ranged from "Everything that can be done is being done at the university level" to "Universities that disqualify or fail to admit people for other than the failure to meet academic requirements should be shut down."

The major suggestion in this area was to raise the awareness level of employers and professors. Seven people indicated that equity in educational research would improve if unrealistically low or high expectations and perceptions of minorities and women were changed. Other suggestions were that institutional money be given to new researchers (two) and that a special research period (lower class loads, more supportive services) be set aside for new researchers (three). Respondents also suggested employers use better recruitment procedures (five) and more objective performance evaluations (two).

Suggestions for professional organizations focused on the services that these organizations could provide including facilitating ways that established researchers could act as mentors (eight) and establishing network support groups (five). Organizations were also requested to recruit more minority members (two) make minorities and women more visible (two) and to mainstream minority researchers and research interests in workshops and programs (two). Again few specifics were included. Five respondents specifically mentioned the American Educational Research Association as an organization that was working to achieve equity in educational research and indicated their hope that AERA would continue in that direction.

The final area of suggestions was for the government. Again, somewhat unrealistically, in this time of budget cuts, ten people suggested that more money be spent for educational research by and for minorities and women. More fellowships (three), internships (one), training monies (three) and in general a continuation of the programs and services provided by NIE's Minority and Women's Program, were mentioned as well. Programs under the Minority and Women's Program were also mentioned as the source of two of the five instances of positive treatment that surfaced in the interview.

Respondents also had suggestions about the grant award process. As one respondent indicated there is a perception that "equity can only occur when the population reviewing and giving grants is representative of all groups. Three respondents wanted grants to be awarded on the quality of the proposals, inferring that this is not currently the case, two respondents suggested using a blind review process and three suggested more minority group members and majority group members who are sensitive to minority issues be included on review panels.

Finally, two respondents suggested that the best way to improve equity in educational research was not to develop new programs but merely to enforce existing affirmative action requirements.

Respondents suggestions, with some exceptions, could be summarized into three statements - change the individuals, change society and provide more money. Little was brought out that was new or that had much potential of being accomplished. Unfortunately the research on ways to achieve equity in educational research is just not there. Suggestions must then be based on intuition and perceptions and there is little evidence to indicate they would be successful if they were tried.

VI. Conclusions and Implications

Organizational Survey

The results of the three surveys conducted under this project included both expected and unexpected findings. As might be expected, the organizational survey found that women and minorities are underrepresented in professional positions in educational research and research related organizations. Women who are involved in educational research are more apt than men to be part time workers and even when full time, are more likely to be clustered at the lower professional job levels. Minority group members, are not, for the most part, more likely to be part-time workers, but are most likely to be found at the lower professional levels. When both sex and ethnic background are examined minority women and men are equally apt to work full time while White women are most apt to work. Regardless of ethnic background, women were more apt than men to work at the lower job levels. Proportionately White women were more likely than minority men to be in the lower job levels. None of this is really surprising. Educational research merely reflects the general pattern for employment with White men at the highest levels followed by minority men, White women and, at the bottom, minority women.

Perhaps, of greater interest is the pattern of where the minority and women researchers are located. When the organizations employing researchers are broken into three sectors - the public education sector, the academic sector and the private non-teaching sector - the academic sector is least representative of the general population or even of the population of professional researchers in terms of sex and ethnic background. While universities and colleges have the largest number of researchers organizations from the public education sector have the highest percentage of women and organizations from the non-teaching sector have the highest percentage of minority group members.

These groups, who employ the larger percentages of minorities and women were found by the Bureau of Social Science Research Survey and Research Related Organizations to have other research advantages as well. For example, while academics can be presumed to have more leeway in their choice of research projects, the BSSR survey found that private, non-teaching organizations seem to provide more non-traditional coverage of research addressing a wider range of topics. (Sharp and Frankel, 1979). Yet private organizations receive a small share of the R and D funds and, at least according to the current survey, are the most apt to go out of business or to stop doing research.

The second most likely group to stop doing research is the public education sector, with its higher percentage of women. As federal funds are cut and taxpayer revolts grow, this trend is likely to continue and increase in spite of the BSSR survey's conclusion that "if RDD and E activities are to achieve a higher level of acceptance by practitioners and local policy makers, more activity must occur in the public education arena" (Sharp and Frankel, 1979).

It is also interesting to note that while a majority of researchers in the public education sector (54%) and in the private non-teaching sector (51%) are in the two lowest job levels, fewer than 40% of the academic researchers are in these categories. This smaller proportion of lower and entry level professionals in academia may be tied to the smaller percentage of women and minorities doing research there. The academic sector outdistances the private non-teaching sector and the public education sector in terms of both dollars spent on research (Sharp and Frankel, 1979) and personnel involved in educational research, with 69% of the researchers in this survey working in the academic sector. The academic sector was also found to be the most apt to continue doing research, yet it is the least equitable in terms of the sex and ethnic background of its researchers.

The organizational survey found as well that the amount of federal funds received by an organization is somewhat related to the percentage of minority and women professionals employed. For example a higher proportion of women than men are employed by organizations who receive more than 75% of their research money from the federal government. Whites, with the exception of Asian/Pacific Islanders, are more apt than researchers from other ethnic backgrounds to work for organizations who receive no federal money and slightly less apt to be working for organizations who receive more than 75% of their research money from the federal government.

Much of the educational research that is being done today is paid for by federal money. Responding organizations indicated that 28% of their research funds come from federal sources. Almost all educational research is supported by federal, state or local government money. Responding organizations indicated that 75% of their research funds came from public sources. Indeed less than 10% of the research professionals work for organizations who receive less than 25% of their research over 75% of their educational research funding from public sources. The public monies pay for most educational research and if the public, and the government who represents that public, require that organizations who receive public money, do not discriminate in employment, some differences may occur. It also appears however that without public and governmental financial support for educational research, little research will be done and few practicing researchers will exist.

It may be that from a research perspective, the most valuable conclusion from the organizational survey is not related to the results of the survey but rather to the response rate. It is frequently stated that asking questions about sex and ethnic background in a survey questionnaire lowers the response rate. This concept was said to be behind the decision of the BSSR survey authors not to include questions dealing with the sex and ethnic background of professional researchers. This concept, however, may not be correct. As indicated in the organizational survey results, the response rate of this survey (35.1%) which focused on sex and ethnic background information, was over 4% higher than the BSSR survey which chose not to include such information (31%) after follow up comparable to that done for this survey. It may be of value, before deciding not to include sex and ethnic background information on a questionnaire, to field test the questionnaire with and without sex and ethnic background questions to see possible effects on response rate. Valuable information was not collected in the past and may not be collected in the future because of what appears to be an inaccurate assumption.

Individual Survey

As the organizational survey did, the individual survey also provided both new information and a reinforcement of much that already is known. Women and minorities in educational research are less educated, make less money, do less research and receive fewer "perks" and support services. In general both minorities and women feel that they have been recipients of inequitable treatment. The inequitable treatment they report is primarily negative and centers around employment.

Women and men have, demographically, changed little since the 1975 AERA survey of educational researchers. Men are still more apt than women to be married (1975-88% vs. 50%; 1982-82% vs. 53%) and to have a doctorate (1975-80% vs. 65%; 1982-79% vs. 66%). Women are more apt than men to have the Master's as their final degree (1975-16% vs. 30%, 1982-16% vs. 28%) and are more apt to be clustered at the lower salary levels (although salaries for women and men increased substantially from 1975 to 1982).

Men still produce more books, book chapters and monographs than women. Researchers are still more apt, regardless of sex, to be employed at colleges and universities, and do not differ significantly in time of where they are employed. (Lipman-Bluman, Stivers, Tichmyer & Brainard, 1975).

Differences by sex were quite clear. Where there were differences, they favored men. Differences by ethnic background were more complex. While most differences favored Whites, they did not do so with the consistency or degree found in sex differences. Blacks, for example, had the highest percent of respondents in the upper salary levels, but had the lowest percent who received assistantships. Asians had the highest percent of assistantships but were lowest in the salary scales. In both variables Whites were second highest. Few discernable patterns emerged by ethnic background.

One pattern that emerged was one of similarities not differences. Few differences were found, either by sex or ethnic background, in terms of how researchers spent their time and from where they received their research funds. Major differences by sex and ethnic background were found however in professional productivity. Differences were found by sex, in professional activities and rewards but not by ethnic background. The more consistent sex differences, always favoring men, were also consistent across ethnic background. For example, no significant interactions by sex and ethnic background were found in either professional rewards or activities.

The lack of significant interactions was also found when respondents were asked the role minority and women's concerns played in their research. As might be expected minorities, with the exception of Asian/Pacific Islanders are more apt than Whites to do research dealing with minorities and women are more apt than men to do research dealing with gender issues. Minorities, however, with the exception of Asian/Pacific Islanders are also more apt than Whites to do research on gender issues.

Minorities and women were also most apt to have felt they had experienced inequitable treatment. As might be expected White women perceived their inequitable treatment being based on sex; minority men on ethnic background and minority women on both sex and ethnic background. Most of the inequitable treatment mentioned was negative and was in employment. There were significant interactions by sex and ethnic background in reporting inequitable treatment because of ethnic background, but further analysis revealed no obvious patterns.

Further analysis also revealed no correlations between perceptions of inequitable treatment and professional rewards, productivity or activities. Neither did any of these areas correlate with the respondents' perceptions of spouse's and children's affects on their careers. This may be because respondents were unable to indicate the seriousness of instances of inequitable treatment or because some respondents' perceptions were inaccurate or it may just be that perceptions of inequitable treatment and perceived affects of spouse's career and children on respondents' careers are just not related to such areas as professional productivity, rewards or activities.

In summary, almost independent of the variable, White men are doing better than other groups and perceive themselves as receiving less inequitable treatment than other groups. Yet individual perceptions of inequitable treatment do not appear directly related to those measures of "doing better" as rewards, productivity and activities.

Telephone Survey

The telephone survey was expected to result in information on a variety of ways to respond to inequitable treatment and the effectiveness of those responses. Unfortunately this did not turn out to be the case. While a number of different types of recent inequitable treatments were described by interviewees, few responses to the treatment were described and even fewer were felt to be effective:

Types of inequitable treatment described by interviewees fell into three major categories; money, jobs and professional support. The first two categories are covered by a variety of existing anti-discrimination laws and executive orders; the third with its emphasis on professional relationships and collegiality is not. It would be expected that responses to the different forms of inequitable treatment would be different, but they were not.

The major ways interviewees responded to inequitable treatment of its type was to either do nothing or to talk about the treatment to superiors or peers. Respondents found using other, possibly more effective approaches, such as court suits or appeals, because of the negative long term effects it might have on their careers. No one in this self selected sample who chose to be interviewed about their own inequitable treatment had used any of the laws or the legal system in their response to inequitable treatment.

There were few types of responses to inequitable treatment and those mentioned that were perceived as effective were somewhat unrealistic; for example "I got another job at a higher salary." This does appear to indicate a lack of knowledge on the part of interviewees in how to deal with inequitable treatment. Both the individual and telephone surveys found that negative inequitable treatment is still perceived as occurring, particularly in employment, yet few know how to respond to it.

It was hoped that the telephone survey might serve to generate some hypothesis on the effectiveness of specific responses, instead it points out the tremendous need to educate minority and women educational researchers as to what their options are when they are treated inequitably and how they might deal with potential problems.

It is interesting to note that the Minority and Women's Program at NIE was responsible for two of the five instances of positive inequitable treatment mentioned in the interviews. It may be through that program or others like it, people's lack of knowledge of how to respond to negative inequitable treatment can be remedied. As minorities and women learn to deal more effectively with negative inequitable treatment and share their information with others, negative inequitable treatment should decrease.

Interviewees had a number of suggestions on how to increase equity in educational research including the continuation of the Minority and Women's Program of NIE. The suggestions involved change - changing organizations to make them more responsive, changing individuals to make them more skilled and changing the focus of funding to include more programs, scholarships and funded support groups for minorities and women. While many of the ideas had value, they had little evidence to substantiate their effectiveness. What will work to increase equity in educational research is just not known.

It appears that at this time we still do not know what to do or who to do it to in order to make further steps toward equity. We do however, now, know from where we are starting.

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American Educational Research Association
Survey of Educational Research and Development Units

Organization Name _____

Your Name _____
Your Title _____

The questionnaire is confidential. Neither names of individuals nor institutionally identifiable data will be released.

1. If your unit is no longer involved in educational research and development, please check the line to the left and return the questionnaire in the enclosed envelope.

2. Please estimate the approximate percent of time your unit spends in the following activities as of January 1, 1981:

- _____ % Educational Research (R)
- _____ % Educational Development (D)
- _____ % Educational Dissemination (D)
- _____ % Educational Evaluation (E)
- _____ % Policy Studies
- _____ % Administration or Management
- _____ % Teaching or Training

3. Please estimate the approximate percent of funds for educational RDD&E your unit receives from each of the following sources as of January 1, 1981:

- _____ % from the Federal Government
- _____ % from State Governments
- _____ % from Local Governments
- _____ % from Foundations
- _____ % from Corporations
- _____ % from Other Sources

4. Please indicate the number of your full-time and part-time professionals in each of the following categories who are involved in educational RDD&E:

Males		Females	
Full-Time	Part-Time	Full-Time	Part-Time
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

White
Black
Hispanic
Asian/Pacific Island
American Indian

5. For each of the four job levels below please indicate the number of your full-time research and development professional staff who fit into the following sex and ethnicity categories. (If persons can fit into more than one category, please count them in the highest category.)

Level A (i.e. Administrative Director, Dean, Professor) Level C (i.e. Research Associate, Asst. Professor)
Level B (i.e. Senior Researcher, Associate Professor) Level D (i.e. Research Assistant, Instructor)

Males				Females			
Level A	Level B	Level C	Level D	Level A	Level B	Level C	Level D
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

White
Black
Hispanic
Asian/Pacific Island
American Indian

Please return the questionnaire to:

Dr. Patricia B. Cambell
AERA Survey
Campbell-Kibler Associates
450 Red Hill Road
Middletown, N.J. 07748

Appendix
Copies of Survey Instruments

American Educational Research Association
Survey of Educational Researchers

Please fill in, on the line to the left, the number of the response which best answers the question. The questionnaire is confidential and no individually identifiable data will be released.

EDUCATIONAL INFORMATION

- _____ 1. What is the highest degree that you hold?
- | | |
|------------------------------|----------------------|
| 1. Ph.D. | 5. Master's Degree |
| 2. Ed.D. | 6. Bachelor's Degree |
| 3. Other Professional Degree | 7. Other |
| 4. Specialist Certificate | |
- _____ 2. In what year did you receive your highest degree?
- _____ 3. Please indicate the major way or two major ways by which your graduate education was financed.
- | | |
|---------------------------|------------------------------------|
| 1. Scholarship/Fellowship | 6. Family Resources |
| 2. Loans | 7. Assistantships |
| 3. Personal Earnings | 8. Grant, Loan, Employment Package |
| 4. Personal GI Benefits | 9. Other |
| 5. Personal Savings | |
- _____ 4. Have you ever been a teaching assistant?
- | | |
|--------|-------|
| 1. Yes | 2. No |
|--------|-------|
- _____ 5. Have you ever been a research assistant?
- | | |
|--------|-------|
| 1. Yes | 2. No |
|--------|-------|
- _____ 6. Please indicate the major activity or two major activities in which your work time was spent as a research assistant.
- | | |
|-------------------------|----------------------------------|
| 1. Not Applicable | 5. Conceptual Design of Research |
| 2. Clerical Work | 6. Research Synthesis |
| 3. Statistical Analysis | 7. Interpretation |
| 4. Field Work | 8. Other |
- _____ 7. As a graduate student was there a faculty or staff member who took a special interest in your future career plans?
- | | |
|--------|-------|
| 1. Yes | 2. No |
|--------|-------|

PERCEPTIONS

Using the following matrix, please indicate in which, if any, of the following areas (rows) and for which of the following reasons (columns) you may have been treated inequitably. Place a 1 in the block if you received negative inequitable treatment and a 2 if you received positive inequitable treatment.

Areas	Reasons					
	Ethnic Background	Gender	Physical Disability	Sexual Preference	Marital Status	Religion
Graduate Education						
Academic Requirements						
Admissions						
Assistantships						
Financial Aid						
Housing						
Professor-Student Relationships						
Other (Please Specify)						
Employment						
Allocation of Supportive Services						
Collegial Relationships						
Hiring						
Promotion						
Retention						
Salaries						
Other (Please Specify)						

EMPLOYMENT INFORMATION

- _____ 1. Where are you currently employed?
- | | |
|--------------------------------|----------------------------------|
| 1. University | 5. Public (K-12) Education |
| 2. College | 6. Other Non-profit Organization |
| 3. Junior or Community College | 7. For-profit organization |
| 4. State Education Department | |
- _____ 2. Is your employment contingent on state, federal, or private funds which are not part of your institution's regular budget? (Soft money.)
- | | |
|--------|-------|
| 1. Yes | 2. No |
|--------|-------|
- _____ 3. If your employment is contingent on "soft money", please indicate the approximate percentage of your salary that it covers.
- _____ 4. Approximately what percentage of your time is spent in the following activities:
- | | |
|---------|------------------------------|
| _____ % | Research |
| _____ % | Development |
| _____ % | Dissemination |
| _____ % | Evaluation |
| _____ % | Policy Studies |
| _____ % | Administration or Management |
| _____ % | Teaching or Training |
- _____ 5. Approximately what percentage of the funds for R&D projects on which you are currently working come from each of the following sources?
- | | |
|---------|--|
| _____ % | Federal Government |
| _____ % | State Government |
| _____ % | Local Government |
| _____ % | Industry/Corporate Sector |
| _____ % | Non-profit Foundation |
| _____ % | Employing Institutions's Funds |
| _____ % | Employing Institution's Resources (i.e., mailing, copying) |
| _____ % | Personal Funds |
- _____ 6. What was your own (excluding spouse's) earned income from employment and related professional activities last year?
- | | |
|----------------------|----------------------|
| 1. Under \$8,000 | 5. \$24,000-\$29,999 |
| 2. \$8,000-\$12,999 | 6. \$30,000-\$39,999 |
| 3. \$13,000-\$17,999 | 7. \$40,000-\$49,999 |
| 4. \$18,000-\$23,999 | 8. Over \$50,000 |

PROFESSIONAL ACTIVITY INFORMATION

1. Approximately how many of the following activities have you done in addition to your regular job duties?
- | | |
|-------|---|
| _____ | Paid Consultancies |
| _____ | Proposal Reviewing for Federal Agencies, Foundations |
| _____ | Reviewing or Acting as an Editorial Board Member for a Professional Organization |
| _____ | Serving as an Editor or Associate Editor for a Professional Organization |
| _____ | Holding Office for a Professional Organization |
| _____ | Holding Committee Membership for a Professional Organization |
| _____ | Giving an Invited or Keynote Address at a Professional Meeting of a National Organization |
2. Approximately how many of the following professional products have you produced?
- | | |
|-------|-----------------------------------|
| _____ | Articles in Refereed Journals |
| _____ | Articles in Non-refereed Journals |
| _____ | Books and Book Chapters |
| _____ | Paper Presentations |
| _____ | Funded Proposals |
| _____ | Unpublished Submitted Manuscripts |
| _____ | Unfunded Submitted Proposals |

3. Have you received any of the following?

1. Yes

2. No

- Released Time for Non-funded Research
 Released Time for Outside Professional Activities (i.e., editorships)
 Released Time for Advanced Professional Training
 Seed Money (Initial Money to Start a Project)
 Research Assistants (paid with Federal money)
 Sabbaticals
 Summer Fellowships
 Special Leaves
 Named Professorships
 Within Institution Awards and Honors

4. To what extent are minority-based concerns in your research, development, dissemination or evaluation efforts?

1. Regularly
2. Occasionally

3. Rarely
4. Never

5. To what extent are gender-based concerns in your research, development, dissemination or evaluation efforts?

1. Regularly
2. Occasionally

3. Rarely
4. Never

6. To what extent do you conduct research, development, dissemination or evaluation efforts that deal solely with minority issues?

1. Regularly
2. Occasionally

3. Rarely
4. Never

7. To what extent do you conduct research, development, dissemination or evaluation efforts that deal solely with gender issues?

1. Regularly
2. Occasionally

3. Rarely
4. Never

BACKGROUND INFORMATION

1. Sex: 1. Male

2. Female

2. Ethnic Background:

1. White (Non-Hispanic)
2. Black (Non-Hispanic)
3. Cuban
4. Puerto Rican

5. Mexican-American
6. Other Hispanic
7. Asian/Pacific Islander
8. American Indian

3. Do you describe yourself as physically disabled?

1. Yes

2. No

If yes, please describe: _____

4. Age: 1. Under 30
2. 30-39
3. 40-49

4. 50-59
5. 60 or above

5. Mother's Educational Level:

1. Elementary School
2. Some High School
3. High School Graduate
4. Some College

5. College Graduate
6. Some Graduate Study
7. Master's Degree
8. Doctoral/Professional Degree

6. Father's Educational Level:

1. Elementary School
2. Some High School
3. High School Graduate
4. Some College

5. College Graduate
6. Some Graduate Study
7. Master's Degree
8. Doctoral/Professional Degree

- _____ 7. Current Residential Area:
 - 1. Northeast
 - 2. Southeast
 - 3. Mid-Atlantic
 - 4. Midwest
 - 5. Rocky Mountains
 - 6. Southwest
 - 7. Far West

- _____ 8. Current Marital Status:
 - 1. Never Married
 - 2. Divorced
 - 3. Widowed
 - 4. Separated
 - 5. Married

- _____ 9. To what extent has the care of minor children affected your career:
 - 1. A Major Positive Affect
 - 2. A Minor Positive Affect
 - 3. No Affect
 - 4. A Major Negative Affect
 - 5. A Minor Negative Affect

If you have never been married, please proceed to ADDITIONAL COMMENTS.

- _____ 10. Spouse's Current Employment:
 - 1. Full-time Homemaker
 - 2. Professor, Research Administrator
 - 3. Other Professional/Managerial
 - 4. Unemployed
 - 5. Clerical, Sales
 - 6. Other
 - 7. Not Currently Married

- _____ 11. What effect has your spouse's (or former spouse's) job had on your academic preparation for your career?
 - 1. A Major Positive Affect
 - 2. A Minor Positive Affect
 - 3. No Affect
 - 4. A Minor Negative Affect
 - 5. A Major Negative Affect
 - 6. Not Applicable

- _____ 12. What effect has your spouse's (or former spouse's) job had on the beginning years in your career?
 - 1. A Major Positive Affect
 - 2. A Minor Positive Affect
 - 3. No Affect
 - 4. A Minor Negative Affect
 - 5. A Major Negative Affect
 - 6. Not Applicable

- _____ 13. What effect has your spouse's (or former spouse's) job had on your career currently?
 - 1. A Major Positive Affect
 - 2. A Minor Positive Affect
 - 3. No Affect
 - 4. A Minor Negative Affect
 - 5. A Major Negative Affect

ADDITIONAL COMMENTS

Please check the appropriate box on the enclosed postcard if you are interested in participating in a 15-20 minute telephone interview regarding your experiences with and effective responses to inequitable treatment.

In addition, if you identify yourself as a researcher on minority/gender based issues, check the appropriate line on the enclosed postcard.

Thank you for your assistance. Please return the questionnaire, in the enclosed envelope, to:

Dr. Patricia B. Campbell
 AERA Survey
 Campbell-Kibler Associates
 450 Red Hill Road
 Middletown, N.J. 07748

