

Navy Personnel Research and Development Center

San Diego, CA 92152-6800 TR 90-1 October 1989



2

AD-A214 904

FILE COPY

Incidence of Pregnancy and Single Parenthood Among Enlisted Personnel in the Navy

DTIC
ELECT
DEC 04 1989
S B D

**Incidence of Pregnancy and Single Parenthood
Among Enlisted Personnel in the Navy**

Patricia J. Thomas
Jack E. Edwards

Reviewed by
Paul Rosenfeld

Approved by
Richard C. Sorenson
Director, Personnel Systems Department (Acting)

Released by
B. E. Bacon
Captain, U.S. Navy
Commanding Officer
and
J. S. McMichael
Technical Director

Approved for public release;
distribution is unlimited.

Navy Personnel Research and Development Center
San Diego, California 92152-6800

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE October 1989		3. REPORT TYPE AND DATE COVERED Final, May 1988-Sep 1988	
4. TITLE AND SUBTITLE Incidence of Pregnancy and Single Parenthood Among Enlisted Personnel in the Navy				5. FUNDING NUMBERS 0603707N R1770 MP039	
6. AUTHOR(S) Patricia J. Thomas and Jack E. Edwards					
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Navy Personnel Research and Development Center San Diego, California 92152-6800				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSORING/MONITORING AGENCY REPORT NUMBER TR 90-1	
11. SUPPLEMENTARY NOTES					
12a. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution is unlimited.				12b. DISTRIBUTION CODE	
13. ABSTRACT (Maximum 200 words) Pregnant women and single parents are believed to have a negative impact upon mission accomplishment because of absences, lack of assignment flexibility, and the administrative burden they cause. As the number of women in the Navy increases, so will the number of pregnancies. Single parenthood, while not female exclusive, is five times more prevalent among women than men in the United States. Thus, facts, as opposed to perceptions, regarding both pregnant women and single parents need to be established so that effective policies can be developed. This effort represents the first phase of a 3-year research project. The purpose of this initial phase was to establish the number of pregnant women and single parents in the Navy. Women's and men's versions of a special purpose survey were designed and mailed to a sample of approximately 9,200 enlisted personnel under anonymous conditions. In the analysis, response frequencies were weighted to develop estimates that would be representative of the enlisted force of each gender. In addition, comparisons were made of the responses of subgroups of interest.					
14. SUBJECT TERMS Pregnancy, women, single parents				15. NUMBER OF PAGES 51	
				16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT UNCLASSIFIED	18. SECURITY CLASSIFICATION OF THIS PAGE UNCLASSIFIED	19. SECURITY CLASSIFICATION OF ABSTRACT UNCLASSIFIED	20. LIMITATION OF ABSTRACT UNLIMITED		

The results can be summarized with eight major findings:

1. The pregnancy rate of Navy women is similar to that of their civilian age cohorts, including the rates for unmarried military and civilian women.
2. Pregnancy rates are highest among women in their first enlistment and the majority of these pregnancies are unplanned.
3. The abortion and miscarriage/stillbirth rates of Navy women are lower than those of civilians.
4. Women in ships have a lower pregnancy rate than those assigned ashore.
5. Policies in regards to pregnant women are not well known by male supervisors.
6. The proportion of single parents in the Navy is double that found in civilian society.
7. Single parenthood is more typical of personnel in their second and subsequent enlistments than among first termers. The majority of these single career personnel were previously married.
8. Only half of the female and a quarter of the male single parents have an up-to-date Dependent Care Certificate in their service records.

One recommendation was offered:

1. Policies in regards to pregnant women and single parents should be emphasized during officer and enlisted leadership training.

FOREWORD

This survey effort represents the first phase of a 3-year research project to investigate the impact of pregnancy and single parents on mission accomplishment in the Navy. The purpose of this phase was to determine how many enlisted personnel are single parents or are currently pregnant, since reliable statistics on these populations are nonexistent. In addition, characteristics of these personnel and of their current assignments were explored. Findings and recommendations are for the use of the Chief of Naval Operations (OP-01W, OP-114, OP-13) and the Surgeon General of the Navy (MED- 25).

The overall effort is being conducted within the advanced development Program Element 0603707N, Project R1770, under the mission sponsorship of the Chief of Naval Operations (OP-01B2). The results are expected to benefit the Navy by providing the information needed to develop policies to effectively manage pregnancy and single parenthood.

The authors wish to thank all of the people who helped stuff envelopes and mail the survey on time, the enlisted personnel throughout the Navy who promptly responded to the survey, and Vicki Ostern for conducting the statistical analyses.

B. E. BACON
Captain, U.S. Navy
Commanding Officer

J. S. McMICHAEL
Technical Director

Accession For	
NTIS GRA&I	☒
DTIC TAB	☐
Unannounced	☐
Justification	
By	
Distribution/	
Availability Codes	
Avail and/or	
Dist	Special
A-1	

SUMMARY

Problem

Pregnant women and single parents are believed to have a negative impact upon mission accomplishment because of absences, lack of assignment flexibility, and the administrative burden they cause. As the number of women in the Navy increases, so will the number of pregnancies. Single parenthood, while not female exclusive, is five times more prevalent among women than men in the United States. Thus, facts, as opposed to perceptions, regarding both pregnant women and single parents must be established so that effective policies can be developed.

Objective

This effort represents the first phase of a 3-year research project. The purpose of this initial phase was to establish the number of pregnant women and single parents in the Navy.

Approach

Women's and men's versions of a special purpose survey were designed and mailed to a sample of approximately 9,200 enlisted personnel under anonymous conditions. In the analyses, response frequencies were weighted to develop estimates that would be representative of the enlisted force of each gender. In addition, comparisons were made of the responses of subgroups of interest.

Findings

1. The pregnancy rate of Navy women is similar to that of their civilian age cohorts, including the rates for unmarried military and civilian women.
2. Pregnancy rates are highest among women in their first enlistment and the majority of these pregnancies are unplanned.
3. The abortion and miscarriage/stillbirth rates of Navy women are lower than those of civilians.
4. Women in ships have a lower pregnancy rate than those assigned ashore.
5. Policies in regards to pregnant women are not well known by male supervisors.
6. The proportion of single parents in the Navy is double that found in civilian society.
7. Single parenthood is more typical of personnel in their second and subsequent enlistments than among first termers. The majority of these single, career personnel were previously married.
8. Only half of the female and a quarter of the male single parents have an up-to-date Dependent Care Certificate in their service records.

Recommendation

1. The Director of Total Force Training and Education should ensure that policies in regards to pregnant women and single parents are emphasized during officer and enlisted leadership training.

CONTENTS

	Page
INTRODUCTION	1
Pregnancy.....	1
Single Parenthood	2
Purpose.....	2
APPROACH	3
Survey Instrument.....	3
Sampling Design.....	3
Procedure	3
Data Analysis	4
RESULTS FOR PREGNANCY ITEMS	5
Women Who are Currently Pregnant.....	5
Expanded Sample of Pregnant Women.....	9
Sex Education	10
Pregnancy Policy	11
Cross-Service Comparative Data.....	15
RESULTS FOR SINGLE PARENTHOOD ITEMS	16
Marital and Parental Status	16
Single Parents	17
DISCUSSION	20
Pregnancy.....	20
Single Parents	22
CONCLUSIONS AND RECOMMENDATION	23
REFERENCES	25
APPENDIX A--SURVEY OF NAVY WOMEN	A-0
DISTRIBUTION LIST	

LIST OF TABLES

	Page
1. Size of Survey Sample	4
2. Weights Applied to Pay Grade Strata to Derive Navy-wide Distributions.....	5
3. Responses to Question on Pregnancy	5
4. Representation of Pregnant Women by Duty Location	7
5. Representation of Pregnant Women by Race and Age	7
6. Representation of Pregnant Women by Marital Status	8
7. Background Data for Current or Most Recent Pregnancy	9
8. Percentage of Personnel Who Attended a Navy Sex Education Course and Were Involved with a Pregnancy	11
9. Outcome of Most Recent Pregnancy	12
10. Management Issues in Pregnancy.....	13
11. Responses of All Women and E-6 to E-9 Men to Policy Questions	14
12. Marital and Parental Status as Recruits	16
13. Current Parental Status	17
14. Marital Status of Navy Parents	17
15. Duty Assignment of Navy Parents.....	19
16. Percentage of Single Parents with a Current Dependent Care Certificate.....	19
17. Perceptions of Policy and Practice in Regards to Single Parents	20

LIST OF FIGURES

1. Distribution of respondents who were pregnant by pay grade and rating	6
2. Percentage of enlisted women who delivered in their respective military hospitals in 1987	15
3. Distribution of enlisted single parents by sex and pay grade	18

INTRODUCTION

Pregnancy

Historically, active duty women were involuntarily separated from the military if they became pregnant. In 1972, this policy was amended and provision was made for exceptions to separation on a case-by-case basis. Finally, in August 1975, the discharge policy was abandoned following several challenges to its constitutionality (Beans, 1975). Today military women who want to remain in the service while pregnant may do so.

The voiding of the discharge policy for pregnant women was soon followed by charges that mission accomplishment was being negatively affected. In 1976 alone, three complaints reached the desk of the Chief of Naval Personnel. These letters charged that the new pregnancy policy: (1) created a morale problem because women were granted time off for an absence that "is a result of the individual's personal action as opposed to disability which is inflicted as a result of service in the Navy" (Pierce, 1976); (2) caused a 20 percent unplanned loss rate and might be discriminatory, since men were not granted honorable discharges when they requested one of their command (Price, 1976); and (3) was "the most serious problem in the management control of enlisted personnel" (Carmody, 1976). The Chief of Naval Personnel, in responding to recommendations to reinstitute the earlier pregnancy discharge policy, stated that "all arguments supporting involuntary separation were present under the previous policy The current policy of voluntary separation is morally and practically correct" (Smedberg, 1976).

In 1977, the Navy Personnel Research and Development Center assessed the effect of the new policy on absenteeism, morale, and productivity. The major findings of the study (Olson & Stumpf, 1978) were that (1) women were responsible for fewer days of absenteeism than men even when pregnancy absences were included and (2) over two-thirds of the personnel who had worked with a pregnant woman felt that the productivity of the work group had not been impaired. P. J. Thomas' (1987) later study of the Navy standard workweek supported these findings; work diaries that had been maintained by supervisors for their enlisted subordinates showed no difference in the nonavailable time of women and men.

The perception that pregnant women are detrimental to the Navy's mission has persisted despite such evidence to the contrary. Three factors have contributed to the continuing skepticism. First, critics of Olson and Stumpf's (1978) study legitimately addressed the limited sources of absenteeism that were analyzed and the outdated assignments of women as invalidating factors for today's Navy. Second, most people are unaware of Thomas' (1987) report because it was not widely disseminated. Third, the number of pregnancies among Navy women is believed to be excessive.

Navy pregnancy rates are typically based on the number of service women who are hospitalized at Navy facilities for reasons associated with bearing and delivering children (Hoiberg, 1982). Such figures are known to be underestimates because pregnancies that have been terminated through an elective abortion are not included.¹ An additional source of error stems from not knowing how many women obtain obstetrical services from civilian or other federal (non-Navy)

¹The Hyde Amendment, which states that federal funds cannot be used to pay for elective abortions, was attached to the FY79 Defense Appropriations Bill passed in October 1978. Until October 1988, active duty women and dependents were permitted to pay for an abortion in a military hospital when they were stationed overseas. No longer is this possible.

health care providers. Thus, contemporary, comprehensive information about the incidence of pregnancy and the effectiveness of pregnant women is needed.

Single Parenthood

As with other Navy personnel, policy in regards to single parents (OPNAVINST 1740.4) requires that these parents be available for worldwide deployment. Moreover, the Navy prohibits the enlistment of single parents who have custody of their children. Despite that ban, Navy commands report that problems associated with the dependents of single parents are an administrative burden. For the most part, these problems involve finding adequate child care and housing, particularly overseas, or the parent's lack of flexibility in meeting changes in work hours (Secretary of the Navy, 1987).

In 1988, nearly one-fourth of all children in the United States were living with just one parent, as compared to one-fifth in 1980 (U.S. Department of Commerce, 1988). The lack of comparable basic statistics for Navy personnel hamper policy-makers attempting to determine if a problem does, in fact, exist. Although personnel records provide information on the number of dependents the Navy member supports financially, they fail to indicate whether such children reside in the household. Orthner and Nelson (1980) attempted to overcome the inadequacy of data in personnel tapes by analyzing the emergency forms that are completed whenever personnel are transferred from one command to another. They estimated that approximately 4,500 Navy enlisted personnel are single and have dependent children living with them. This figure is too conservative, however, due to an invalid assumption. Records that specified custodians for the children were interpreted as meaning that the parents did not have legal custody and, as a consequence, were not included in the count of single parents. The Navy, however, requires that single personnel name a custodian for their minor dependents whenever the parent is in a deployed status or assigned where accompanying dependents are not authorized. Thus, it is not known how many of the single parents had temporarily relinquished custody. Kerce (1988) replicated Orthner and Nelson's methodology and arrived at a figure of 18,800 for the total population of single Navy personnel who are also parents. Since the majority of the parents in her sample had named a custodian for their dependents, she concluded that only 3,540 of all Navy personnel are single parents.

The Navy Study Group's Report on Progress of Women in the Navy (Secretary of the Navy, 1987) noted the unavailability of accurate figures on the number of single parents and that there is no way of knowing if the administrative burden that they cause is increasing or constant. The group recommended that a system be developed to monitor the figures and that a study be conducted to evaluate the extent of the burden on commands.

Purpose

In November 1987, the Navy Personnel Research and Development Center was tasked to design a 3-year study of the impact of pregnancy and single parenthood on the Navy. Only enlisted personnel were included in the tasking because proportionately fewer officers can be characterized in this manner and those that are pregnant or single parents are not believed adversely to be affecting mission accomplishment. The first step was to develop reliable estimates of pregnancy and single parenthood. Because the organizational impact of personnel who are not fully deployable differs by gender, rating, and assignment, the rates of single parenthood and pregnancy among subgroups also was to be compared.

APPROACH

Survey Instrument

The special purpose survey that was designed had two versions--one for women and one for men. The items were the same for three sections of the survey: (1) descriptive information about the respondents and their Navy jobs, (2) knowledge of and experiences with Navy policies regarding pregnant women and single parents, and (3) data from unmarried persons who had dependent minors who were born to them (rather than adopted). The pregnancy items were prefaced by a question that terminated the survey for many respondents. That is, those members of the sample who had never been involved with a pregnancy while in the Navy were instructed to mail back their surveys and not attempt to answer the remaining questions. Men were asked about the most recent pregnancy of their wives or female partners. Women were asked questions about their most recent three pregnancies. A copy of the women's version of the survey appears in Appendix A with notations in regards to items that did not appear in the men's form. Since the questions are personal and potentially sensitive, the survey did not request name or social security number.

Sampling Design

A stratified, random sampling procedure was followed with enlisted women and enlisted men treated as separate populations. The variables that were used to stratify the samples were pay grade and occupational group, which had been dichotomized into sea- and shore-intensive ratings.² Seamen recruits (E-1s) were not included in the sample and E-2 and E-3 personnel, whether designated or not, were considered to be nonrated.

The goal of the sampling plan was to obtain a minimum of 100 personnel in each cell after allowing for an expected 45 percent response rate--the usual return rate for a Navy mail-out survey. Because women represent 9.2 percent of the Navy's enlisted force of 540,000 personnel, an approximately equal number of women and men can be obtained from a sample of 1 percent of the male personnel and 10 percent of the female personnel. When within-gender stratification on the basis of pay grade and rating group occurs, adjustments must, however, be made for the large population differences in the cells. For example, all of the women chief petty officers in sea-intensive ratings were sent a survey, because they were less than 40 in number. By contrast, there were almost 75,000 E-3 men, so their sampling proportion was .5 percent.

Procedure

Based on the cell sampling proportions, social security numbers were randomly (where possible) selected from the January 1988 tape of all active duty enlisted personnel. The most recent military address of these personnel was obtained from the data processing center in Navy Military Personnel Command.

The surveys were mailed directly to the personnel at their commands during mid-May 1988. No follow-up on nonreturned surveys was possible, due to anonymity.

²The distribution of Navy ratings into sea- and shore-intensive categories was based on the FY90 Enlisted Billet Quality Guidance Matrix, prepared on 21 December 1987. A sea-intensive billet is defined as one in which the ratio is more than 4 years at sea to each period of 3 years ashore.

All surveys received by 1 August were sent to a contractor for key punching. A preliminary analysis of these data was performed for a management briefing. During November, surveys that subsequently had been received were added to the data base to form the sample on which this report is based. Table 1 shows that the overall response rate was much higher than anticipated.

Table 1
Size of Survey Sample

	Number		Total
	Women	Men	
Surveys mailed	4,027	5,218	9,245
Returned as nondeliverable	280	328	608
Potential sample	3,747	4,890	8,637
Complete surveys received	2,515	3,108	5,623
Response rate (%)	67	64	65

Data Analysis

The primary units of analysis were frequencies and percentages. Whenever Navy- wide, gender-wide, or other aggregate statistics are reported, those estimates have been weighted to reflect the differences between the cell proportions and the proportion of women or men at a given enlisted level in the Navy. Table 2 shows the weights derived for men and women at each pay grade.

Results in all tables are based on weighted distributions or means. For this reason, no numbers of respondents will be indicated, since such information would be misleading. In addition, the usual table of demographic data will not be presented but will be discussed in the context of the variables of interest.

For the most part, statistical significance tests were not applied to these data. Ninety-five percent confidence levels for questions central to the investigation were computed from the standard errors of proportion within each strata. These statistics provide an estimate of the error rate surrounding the obtained percentages, providing a range within which the "true" population percentages reside.

Table 2
Weights Applied to Pay Grade Strata to
Derive Navy-wide Distributions

Pay Grade	Weight	
	Women	Men
E-2	.087	.104
E-3	.275	.167
E-4	.259	.216
E-5	.240	.221
E-6	.116	.183
E-7	.021	.075
E-8/9	.003	.035

RESULTS FOR PREGNANCY ITEMS

Women Who are Currently Pregnant

The responses of women to the question, "At any time since you entered the Navy, have you been pregnant?" are shown in Table 3. Responses of men to the question, "At any time since you entered the Navy, have you caused a pregnancy?" are included for comparison purposes. The proportions are similar. The number of men who have impregnated a woman probably is higher than these percentages indicate because of pregnancies of which they were unaware.

Table 3
Responses to Question on Pregnancy

Answer	Percentage	
	Women	Men
Never been involved with a pregnancy while in the Navy	55.7	58.2
Have been involved with a pregnancy while in the Navy but not currently	35.6	33.9
Involved with a pregnancy now	8.6 ^a	8.0

^aThe 95 percent confidence interval is 7.9 percent to 9.3 percent for women who were pregnant when surveyed.

The distribution of pregnant women in regards to pay grade and rating group is shown in Figure 1. The incidence of pregnancy is greater among women in the lower pay grades than those in higher pay grades--a finding that helps to explain why pregnancy is viewed as epidemic. That is, since 64 percent of all enlisted women are in pay grades E-4 and below and 10 percent of them are pregnant, commands having meaningful numbers of women are affected by this phenomenon. Unlike pay grade, rating group does not have much of an effect on pregnancy rates. Except for minor differences, women in shore- or sea-intensive ratings who are at the same pay grade are getting pregnant at the same rate.

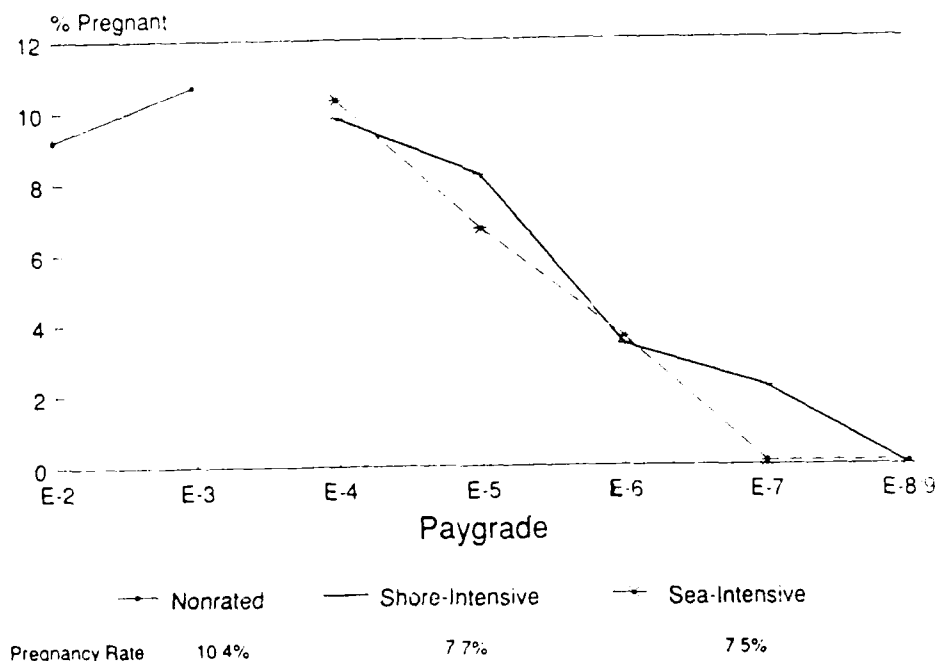


Figure 1. Distribution of respondents who were pregnant by pay grade and rating.

A variable of great concern to the Navy is where women are located when they become pregnant. The reason for this concern is that pregnant women in a ship's crew and those at a remote site without adequate obstetrical care must be reassigned. An additional reason for the interest in location is that women in ships and overseas are widely perceived to have higher pregnancy rates than those ashore or in the continental United States (CONUS). Table 4, which is based on an analysis of item 29d, clearly shows that the perception is erroneous. The pregnancy rates among women who were overseas, in ships, or deployed when they became pregnant are not greater than those of women whose assignments are more typical.

The racial and age-group rates for pregnancies among Navy women are presented in Table 5. White enlisted women had a somewhat lower pregnancy rate than women of other races. Since the abortion rate among nonwhite civilian women is double that of white women (Henshaw, 1987), it is probable that fewer of the former group's pregnancies will be carried to term and that the birthrates of the two groups will be even less disparate. Among civilians, the birthrate of black

women aged 15-44 is significantly higher than that of white women (8.2 versus 6.3 percent in 1985).³ These percentages yield a birthrate for white women that is 77 percent of the rate of black women; in the Navy, the pregnancy rate of white women is 85 percent that of black women.

Table 4

Representation of Pregnant Women by Duty Location

Location	Percentage of Women Who Were Pregnant
CONUS	9.4
Out of CONUS	8.4
Ashore	9.0
Afloat	6.8
Not deployed	8.8
Deployed	7.1

Table 5

Representation of Pregnant Women by Race and Age

Category	Percentage of Women Who Were Pregnant
Race	
White	8.2
Black	9.7
Other	10.4
Age	
Less than 20	5.9
20 to 24	11.0
25 to 29	8.9
30 to 34	4.5
35 to 39	2.0
40 and older	^a

^aLess than .5 percent.

³Reported in U.S. Department of Commerce, 1988. Breakouts by age for racial groups were not reported, making direct comparisons to Navy racial data impossible.

Among age groups, the highest pregnancy rate for active duty women occurs among the 20- to 24-year olds, followed by those who are 25 to 29. Differences between Navy and civilian high-fertility ages are noteworthy. In the U.S. population, the highest birthrate is among women 25 to 29 (11.5%) followed by those 20 to 24 (10.9%) (cited in U.S. Department of Commerce, 1987). When comparing Navy and civilian statistics, it is important to emphasize that Navy's data represent pregnancies and the national data represent births. The pregnancy rate will always be larger than the birthrate.⁴

The marital status of pregnant women is a concern of the Navy because of the difficulties unmarried women encounter when attempting to fulfill their military and parental responsibilities simultaneously. Table 6 presents the percentage of women within each marital category who were pregnant at the time of the survey.

Table 6
Representation of Pregnant Women by Marital Status

Status	Percentage of Women Who Were Pregnant
Married to military member	14.8
Married to civilian	13.5
Overall rate of married women	14.2
Unmarried and living with a man	11.6
Single	4.7
Divorced/separated/widowed	2.3
Overall rate of single women	5.1

About 14 percent of the married women in the Navy were pregnant when they responded to the survey. Women who were living with a man, presumably the father of their child, had a pregnancy rate that was much higher than that of women without a partner. The Navy pregnancy rate of 5.1 percent for unmarried Navy enlisted women is comparable to the 5.0 percent birthrate among unmarried women in the United States in 1986 (U.S. Department of Health and Human Services, 1988).

⁴The pregnancy rates, which are presented herein, have not been adjusted to show an annualized rate. To perform such an adjustment, the percentage of women currently pregnant would need to be multiplied by 1.33. For example, if 8.6 percent of Navy's enlisted women were pregnant at the time of the survey, the annualized rate of pregnancy would be approximately 11.4 percent. That is, during a full 12-month year, about 11 and one-half percent of the enlisted women would be expected to have been in some stage of pregnancy. Current pregnancy rates are given throughout this report since the primary issue of concern is staffing; hence, proportion of women who are pregnant at any given time is of more interest and relevance than is an annualized rate of pregnancy. Health care professionals, on the other hand, may find it more valuable to use the previously mentioned adjustment when they project pregnancy-related health care needs.

Expanded Sample of Pregnant Women

Because the number of women who were pregnant when they responded to the survey was relatively small, slightly over 200, additional analyses were conducted using an expanded sample that included women who had ever been pregnant while in the Navy. This sample consisted of approximately 1,100 women. The responses that are reported in this section are applicable to their most recent pregnancy, 87 percent of which had occurred within the past 3 years, and includes the small group that was pregnant. Table 7, which reports background information, presents the data in terms of the percentage of the sample, rather than percentage of all Navy women having that characteristic, as was reported in earlier tables.

Table 7
Background Data for Current or Most Recent Pregnancy

Variable	Value
Mean age when became pregnant	24.9
Mean pay grade when became pregnant	3.9
Type of duty when became pregnant	
% assigned ashore	88.4
% assigned afloat	11.6
Father	
% in military	70.2
% civilian	29.8
Mean age	26.2
Mean pay grade	4.5
Marital Status	
% married when became pregnant	53.0
% married while pregnant	10.5
% single throughout pregnancy	36.5
Planned pregnancy	
Yes	39.9
No	60.1
Unplanned rate among E-4 and below	67.7
Unplanned rate among E-5 and above	52.8
Unplanned rate among married	37.2
Unplanned rate among unmarried	86.4

Within the larger sample, the average age and pay grade at the time of pregnancy are very similar to the means of the currently pregnant sample. The agreement between the two sets of means suggest that the statistics derived from the smaller group may be considered typical of Navy pregnancies.

The assignment of the members of the larger sample was also analyzed because of the widespread perception that women in ships have higher pregnancy rates than those ashore. Table 7 indicates that 11.6 percent of the respondents were assigned afloat when they became pregnant, whereas 15.5 percent and 14.1 percent of all Navy enlisted women were afloat in 1987 and 1986, respectively (Naval Military Personnel Command, 1986, 1987). Thus, the finding reported in Table 4, that the pregnancy rate among women afloat is not greater than among those ashore, is supported by the analysis of the larger sample.

The next group of items in Table 7 concern the father of the child and family planning. The fathers were somewhat older and of a higher pay grade than the mothers, and 70 percent of the fathers were in the military. Slightly over half of the women were married when they became pregnant. An additional 10 percent were wed during the pregnancy.⁵ The high rate of women who remained unmarried should not be interpreted as representing the proportion who became single parents. Only 54 percent of the unmarried respondents delivered a live infant, whereas 29 percent terminated their pregnancies through an abortion and 17 percent of the women suffered a miscarriage or stillbirth (untabled analysis of item 29g). Moreover, interviews⁶ with pregnant single Navy women reveal that a timely marriage is not always possible when the father is in the military and has been deployed or reassigned overseas. An analysis of the current marital status of the women who were single throughout their most recent pregnancy showed that 35 percent had subsequently married (untabled).

The responses to the question on family planning (item 29b) revealed that the majority (60%) of pregnancies were unplanned. This finding was most pronounced among women in pay grades E-4 and below and among those who were unmarried.

Sex Education

Because of a presumed relationship between unplanned pregnancies and lack of information about human sexuality, the sample was asked whether they had attended a sex education course while in the Navy. Their responses are shown in Table 8. Over half of the respondents of both sexes stated that they had never received sex education while in the Navy. Those who had received such instruction tended to have attended a class during recruit training. After the education variable was dichotomized by collapsing across the times at which sex education classes were attended, the relationship between Navy sex education and unplanned pregnancy was investigated. Only personnel who responded to both question 9 (whether a Navy sex education class had been attended) and question 29b (whether the most recent pregnancy had been planned) were used in

⁵Since the pregnancy rate is high among first-term enlisted women, the majority of whom are single, the distributions reported for marital status in Table 7 are not inconsistent with the previously reported finding of a 5.1 percent pregnancy rate among unmarried Navy women.

⁶In the second phase of this research effort, over 400 pregnant Navy women were interviewed. The results will be discussed in a later report.

this analysis. Neither the chi-square computed for women (1, N = 1,203) nor that of men (1, N = 1,957) was significant (see Table 8). Thus, Navy personnel who have taken a sex education class appear to be as apt to have an unplanned pregnancy as those who have never had such a course.

Table 8

Percentage of Personnel Who Attended a Navy Sex Education Course and Were Involved with a Pregnancy

When Attended	Percentage	
	Women	Men
In recruit training	26.6	23.8
Later in enlistment	15.7	14.0
Never	57.7	62.2
.....		
Sex ed and pregnancy planning ^a		
Chi-square	.477	1.527
Significance level	.49	.22

^aBased on question, "Was this pregnancy planned?"

Table 9, which is based on the outcome of the most recent pregnancy, indicates that there is a linear relationship between pay grade and live births. Nonrated women are having fewer babies per 100 pregnancies than other Navy women.

The percentages of pregnancies resulting in live births, terminated by means of elective abortions, or ended through miscarriage or stillbirth for the civilian population are also presented in Table 9 (Henshaw, Forrest, & Van Vort, 1987). These statistics were not available by age group, so an overall Navy rate was computed to permit comparisons. The Navy live birthrate is higher than that of civilians and the Navy abortion and miscarriage/stilbirth rates are lower.

Pregnancy Policy

Navy policy (OPNAVINST 6000.1 of 1 November 1985) requires that women inform their command of their pregnancies and that the command, in turn, provide women with counseling in regards to their enlistment options (i.e., whether they are eligible for separation from the Navy and their medical benefits). Table 10 provides information about the implementation of this policy.

Three-fourths of the women informed their supervisors of their pregnancies during the first trimester. The 11 percent who never communicated this information probably found it unnecessary to do so because the pregnancy was terminated. Less than half of the women who reported their pregnancy, however, received the required counseling from their commands. Since a possible explanation for this low rate would be the recency of the requirement, this item was reanalyzed for the subsample of women who had been pregnant in the past 2 years. Only 46 percent of the subsample had been counseled. Some of the currently pregnant women could have been counseled after responding to the survey, however.

Table 9
Outcome of Most Recent Pregnancy

Pay Grade When Became Pregnant	Percentage			Still Birth
	Live Birth	Abortion	Miscarriage	
E-1	56	44	a	a
E-2	54	28	15	2
E-3	65	20	14	1
E-4	84	10	6	a
E-5	81	10	7	1
E-6	82	9	9	a
E-7	88	7	5	a
E-8/9	75	a	25	a
Navy Rate	78	13	9	1
Civilian Rate	58	25	17	Included in Miscarriage

^aLess than .5 percent.

Civilian data taken from Henshaw et al. (1987) and Pamuk and Mosher (1988).

Table 10
Management Issues in Pregnancy

	Percentage
Stage of pregnancy when supervisor informed	
First trimester	76.9
Second trimester	10.9
Third trimester	0.9
Never	11.3
Time lag until counseling received^a	
1 or 2 weeks	18.6
3 or 4 weeks	7.2
5 or 6 weeks	2.8
7 to 33 weeks	11.1
Never	60.3
Prenatal facilities used	
Navy	60.6
Other DoD	12.0
Civilian	19.3
Both	3.4
None	4.6
Facilities used or will use for childbirth	
Navy	56.9
Other DoD	12.7
Civilian	18.4
Both	2.6
None	9.5

^aComputed for women who informed their supervisors of their pregnancy.

Navy medical facilities were used by 61 percent of the women for their prenatal care and obstetrical clinics of other military services were used by 12 percent of the respondents. Most (56%) of the women who used nonmilitary clinics indicated that they did so because no military clinics were available in the geographic area where they were assigned. Almost a quarter of those who utilized nonmilitary facilities were required to turn to civilian doctors to obtain an abortion, and 10 percent preferred to pay for the services of a civilian obstetrician, rather than use military facilities. The distribution of responses for facilities used or expected to be used for childbirth was very similar, with the exception of the increase in the group stating "None." Presumably, these women did not carry their pregnancies to term.

Table 11 presents the distribution of responses to the questions tapping knowledge of pregnancy policies. Male first-class and chief petty officers (E-6 to E-9) are included because of their supervisory status. That is, they would need to be knowledgeable about pregnancy regulations to plan for absences and to answer the questions of their pregnant subordinates.

Table 11
Responses of All Women and E-6 to E-9 Men to Policy Questions

Question and Correct Answer	Percentage Responding					
	True		False		Don't Know	
	Women	Men	Women	Men	Women	Men
17 Navy women can elect to be discharged when they become pregnant (T)	82	60	11	23	7	17
20 Time that women take off for childbirth is added to their enlistments (F)	3	6	78	61	19	33
19 Pregnant women cannot be assigned overseas (F)	20	23	58	43	22	34
25 Women who are discharged while pregnant still can receive military medical care in regards to the pregnancy (T)	51	43	19	13	30	44
23 Women can take 30 days off for childbirth without a doctor's chit (T)	40	23	37	34	23	43
21 Women assigned to ships who become pregnant are reassigned ashore as soon as possible (F)	61	48	20	23	19	29
24 Women who have been reassigned ashore must return to sea duty 6 months after childbirth to complete their tour (T)	40	24	10	11	50	65

T = True; F = False.

Note. Some of these policies have subsequently changed.

Both women and men are reasonably well informed about the policies indicated in the first two items (see Table 11). Neither group was well informed about policies regarding pregnant women in ships. More specifically, the majority of women and almost half of the male supervisors incorrectly believe that as soon as pregnancy is confirmed a shipboard sailor is reassigned ashore. In reality, OPNAVINST 6000.1 states that women may be kept in the ship's crew until the 20th week of their pregnancies, unless the ship is deploying. The policy that requires a woman to complete her sea-duty tour (item 24) after childbirth is similarly not well known.

Cross-Service Comparative Data

Since May 1975, official policy throughout the Department of Defense has been that separation from the service for pregnancy is an option available to women and that, with minor exceptions, they cannot be involuntarily discharged. Because regulations affecting pregnant women are similar in all three services, cross-service comparisons of pregnancy rates legitimately can be made. A major problem with such cross-service comparisons, however, is obtaining data in a common metric. Neither the Air Force nor the Army has surveyed a representative sample of personnel; therefore, direct comparisons with the results of this report could not be made. Data that all services have in common, though, are inpatient reports.

Figure 2 shows the percentage of women in each pay grade in the Army, Air Force, and Navy (excluding Marines) that delivered a child during 1987 in a medical facility run by their respective service. These figures were provided by each of the services' medical commands following a written request for information. The plotted curves in the figure are very similar in shape, peaking at the E-4 level. The birthrate of E-2 Air Force women, however, is much higher than that of Army or Navy women. The cross-service comparison of overall rates indicates that Army and Air Force women had very similar birthrates; whereas, Navy women had fewer deliveries in 1987.

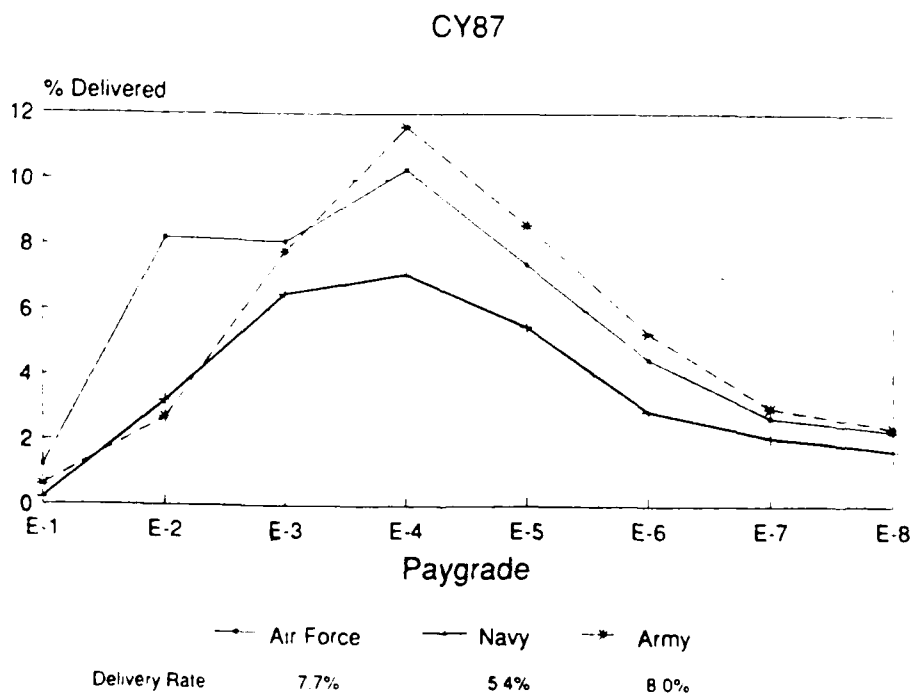


Figure 2. Percentage of enlisted women who delivered in their respective military hospitals in 1987.

Although parallel data were obtained from each of the services, situational differences may exist that affect the results. As an example, it is not known whether the percentage of Air Force, Army, and Navy women who do not deliver in their services' medical facility is similar. There is no evidence to suggest, however, that the birthrate of Navy enlisted women is higher than that of the other services.

RESULTS FOR SINGLE PARENTHOOD ITEMS

Marital and Parental Status

Navy policy requires that single applicants relinquish custody of their children before being allowed to enlist.⁷ Table 12 reveals that the vast majority of the survey respondents were single and without children at the time they entered the Navy. While no gender difference exists in the proportions who were married or parents, 46 percent of the female and 12 percent of the male single parents claimed to have had custody of their children as recruits. In actuality, these figures represent only 3.2 percent (about 200 annually) of women recruits and less than 1 percent (about 400 annually) of the men recruits. Only 28 percent of the women versus 73 percent of the men had relinquished custody of their children permanently. There was no way of knowing whether they did so in order to enter the Navy or for an unrelated reason.

Table 12

Marital and Parental Status as Recruits

Status	Percentage	
	Women	Men
Married	8.7	8.6
Unmarried	91.3	91.4
With children	7.0	6.7
Without children	93.0	93.3
Had custody of children	45.9	11.5
Got custody later	25.9	15.4
Never gained custody	28.2	73.1

Note. Custody question is based on responses of single parents only.

The parental status of the sample at the time they responded to the survey is shown in Table 13. While the proportion of men and women who maintain households with minor children who are their biological offspring is similar, more men have adoptive children and step-children. Because the male enlisted population is older than the female population, this finding is to be expected.

⁷NAVCRTITCOMINS1 1130.8B, the policy statement regarding the enlistment of single parents, was implemented in April 1982.

Table 13
Current Parental Status

Status	Percentage	
	Women	Men
No natural child under 21 in household	63.3	60.4
Natural child under 21 in household	37.7	39.6
.....		
Child of spouse claimed as dependent	1.5	9.6
Adopted child	0.6	2.5

Single Parents

Table 14 presents the distributions of women and men in various types of households. The samples are dichotomized into individuals who are in their first enlistment (E-4 and below) versus individuals in second and subsequent enlistments (E-5 and above). The gender differences in this table are obvious. Of all male parents, 91.8 percent are married, primarily to civilian women; of all female parents, 60.5 percent are married, primarily to other military personnel. A higher percentage of the women (than men) are divorced or separated from their spouse or have never been married. The never-married status is more typical of personnel who are in the lower pay grades than those who are E-5 and above. Finally, female personnel had fewer children in their households than did male personnel.

Table 14
Marital Status of Navy Parents

Status	Percentage					
	Women			Men		
	E-2--E-4	E-5--E-9	Total	E-2--E-4	E-5--E-9	Total
Married to military	35.9	36.5	36.2	1.9	2.9	2.7
Married to civilian	20.9	26.7	24.3	86.5	89.9	89.1
Divorced/separated/ widowed	14.1	26.7	21.5	3.4	4.6	4.3
Single or living with someone	29.4	10.2	18.0	8.3	2.6	3.8
.....						
Mean number of dependent children	1.2	1.6	1.5	1.4	2.1	2.0

Data on civilian parents with natural or adopted children under the age of 18 in the household help to put these statistics into perspective. The 1988 Current Population Survey (U.S. Department of Commerce, 1988) reported that 4.1 percent of male parents and 20.3 percent for female parents are single. Thus, the Navy rates of 8.1 percent for males and 39.5 percent for females are both double the civilian rates.

Table 14 is based on all Navy enlisted personnel (excluding E-1s) who are parents and, thus, does not address the rate of single parenthood in the enlisted population. Figure 3 presents single parenthood rates by pay grade and gender. Unlike pregnancy, which is most prevalent among women in their first enlistment, single parenthood peaks at the E-6 level for personnel of both genders. Twenty-two percent of the women and six percent of the men who are first class petty officers are single parents. The majority of these parents had been married and probably were awarded custody in a divorce action.⁸ The overall single parent rates are 14 percent for women ($\pm 1.3\%$), 3 percent for men ($\pm 6\%$), or 4 percent for the enlisted force ($\pm 7\%$). Thus, the actual population values range from 12.7 to 15.3 percent for women, 2.4 to 3.6 percent for men, and 3.3 to 4.7 percent for all enlisted personnel. Using these statistics, the estimate of single enlisted parents who have physical custody of their children is 6,405 women (± 78) and 14,833 men ($\pm 2,669$).

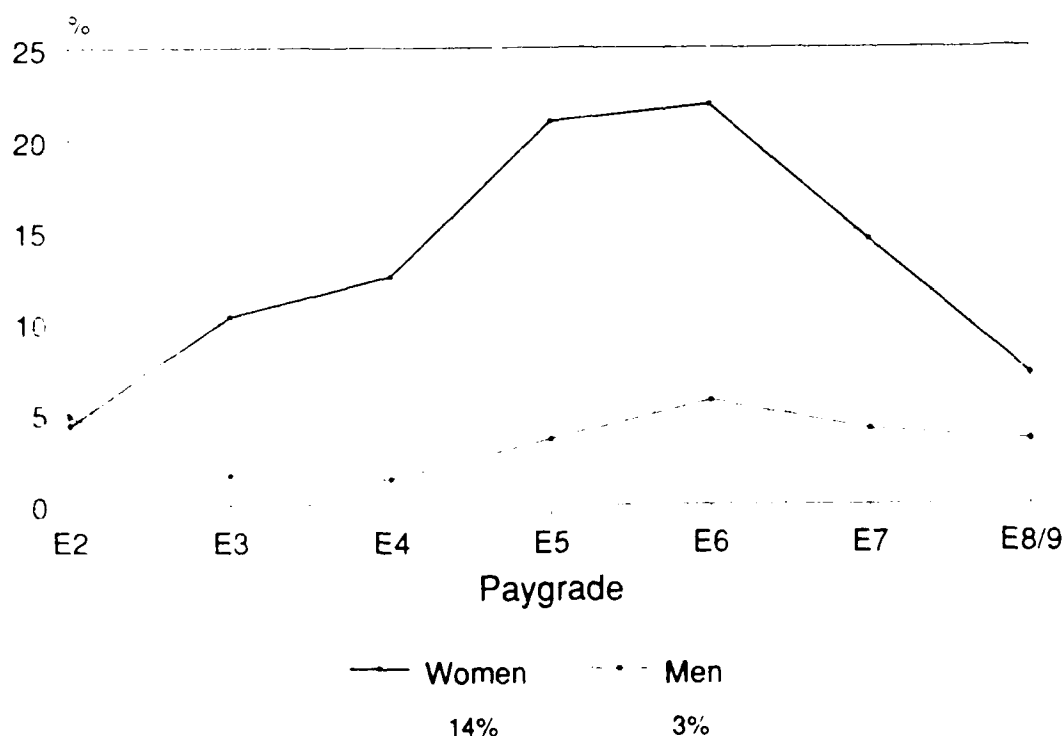


Figure 3. Distribution of enlisted single parents by sex and pay grade.

The duty assignment of all parents, broken down by marital status and gender, is shown in Table 15. No difference is noted between single and married parents in regards to serving in a ship or shore station. A difference of several percentage points exists in the CONUS versus overseas comparison with married parents being more likely than single parents to be outside of the CONUS. Gender differences in assignment are present with a greater percentage of women than men being assigned overseas. The differences are the result of the restricted number of ships in which women may serve.

⁸Seventy-eight percent of the female E-6 and 65 percent of the male E-6 single parents were divorced.

Table 15
Duty Assignment of Navy Parents

Location	Percentage			
	Women		Men	
	Single	Married	Single	Married
Ashore	90	91	57	57
Afloat	10	9	43	43
CONUS	66	63	85	79
Overseas	34	37	15	21

Single parents or military-married-to-military couples with dependents are required to complete a Dependent Care Certificate (OPNAVINST 1740.4 of 22 February 1984) each time they are assigned to a new duty station. The purpose of the form is to ensure that parents have made adequate arrangements for their dependents so that they will be available for assignment worldwide. Table 16 shows how many single parents actually have an up-to-date form in their service record (Item 10c). Compliance with the regulation to make arrangements for the care of dependents appears to depend upon the gender of the single parent. Indeed, over half of the male single parents had never heard of the form, and only about one-fourth had a valid one.

Table 16
Percentage of Single Parents with a Current Dependent Care Certificate

	Percentage	
	Women	Men
Completed form at current command	48.2	28.8
Did not complete at current command	27.6	13.8
Never heard of such a form	24.2	57.5

Another item (10d) questioned who would care for the child if the parent were sent away for temporary duty (TDY) for 30 days or less. Women stated that a relative or civilian in another household would care for their children (37% and 41%). If men were to go TDY, the child's biological mother in another household would provide the care (43%).

Perceptions concerning two policies and one practice affecting single parents also were tapped by the survey. Most personnel know that single parents are permitted to enlist in the Navy if they give up custody of their dependent (see Table 17). The majority of men, however, are misinformed or uninformed about the policy that pertains to overseas assignment where accompanying dependents are not authorized. Women, a greater proportion of whom are affected by this policy

than men, tend to know that single parents must be available for worldwide assignment. The finding for the last item suggests that few female or male single parents are receiving special treatment other than that accorded to married parents.

Table 17
Perceptions of Policy and Practice in Regards to Single Parents

Statement	Percentage	
	Women	Men
22 Single parents cannot enlist in the Navy.		
False	69.7	59.5
True	18.1	13.1
Don't know	12.2	27.4
18 Single parents may be assigned overseas where dependents cannot accompany them.		
True	54.1	28.9
False	18.9	32.5
Don't know	26.9	38.7
26 Single parents in my command get preferential treatment.		
No	66.1	58.9
Yes, but no better than married parents	20.3	22.9
Yes, better than married parents	13.6	18.1

DISCUSSION

Pregnancy

Pregnancy in the Navy is most prevalent among women in their first enlistment. There are several possible explanations for why this should be so. These young women are away from home, most for the first time, and lack the social support and guidance that close friends and relatives can provide. They are out numbered by men 9 to 1 in the Navy and some young women may not be able to deal with the inevitable sexual tension in a mature manner. And, perhaps most important, they are at a very fertile period in their lives and would be expected to have a high pregnancy rate.

Direct comparisons of Navy and civilian data on fertility rates are not possible because of the differences in the types of data collected. National health statistics report births; whereas the focus of this research is pregnancy. Although an estimated Navy birthrate could have been derived (by annualizing the pregnancy rate and weighting the data by the proportion of pregnancies that result in a live birth), such a procedure would not have been able to take into account the number of

women who separated from the Navy prior to giving birth. Because this number is not known with sufficient certainty to adjust the statistics, it was felt that the effort to estimate a Navy birthrate was too fraught with potential error to undertake. Thus, comparisons of Navy rates to civilian rates are tentative, and the reader is forewarned to treat them as such.

The pregnancy rate by age groupings differed, both within the Navy and in comparisons to the civilian birth rates. The highest pregnancy rate of Navy women is in the 20- to 24-year-old group; for civilian births, it is among 25- to 29-year-olds. If comparisons were made for the 10-year age span, rather than two 5-year spans, no difference probably would be found. A possible reason for the difference is that civilian 20- to 24-year-olds include women in colleges and universities and newly graduated professional women, groups that are postponing marriage and childbirth.

Race appears not to influence the pregnancy rates of Navy women to the extent that it does civilian. The pregnancy rate for black women was higher than that of white, but due to the tendency for nonwhites to have more abortions, the birthrates probably were similar.

The widely held perception that higher proportions of women assigned to sea duty get pregnant than those in shore stations was not supported by the data. Two separate analyses were run, one for currently pregnant women and the other for all women who were ever pregnant while in the Navy. Both demonstrated that the pregnancy rate of women in ships is lower than among women ashore. Why, then, is this perception so persistent? One reason is that a portion of what is counted as pregnancy in ships actually occurs ashore. That is, some women are pregnant when they report for duty.⁹ Another contributor to the statistics is the replacement factor. Women who are reassigned ashore due to pregnancy are usually replaced by other women (because of berthing considerations), and a percentage of the replacements become pregnant. In addition, the denominator in computing the pregnancy rate is the number of women on board, not the total number of women serving in the ship over a year's time. Perception may be colored by the belief that women deliberately get pregnant to avoid sea duty. The extra work that results in the period between when a woman is reassigned ashore and her replacement arrives also could influence perceptions. Some commands, by transferring women prior to their 20th week of pregnancy, exacerbate this problem.

Women who become pregnant while overseas create additional unique problems for Navy management. Difficulties arise when pregnant women must be transferred because obstetrical care or housing is not available. The analyses, however, demonstrated that there was very little difference in the pregnancy rates of women in CONUS or outside CONUS.

Marital status of pregnant women is not a moral issue for Navy management but a personnel issue. The pregnancy rate among Navy women who are single is somewhat higher than the birthrate among unmarried civilian women, but the outcomes are probably comparable for two reasons. First, a portion of the pregnant Navy women will marry before the child is born. Second, only one-half to three-fourths of the pregnancies will result in a birth. Even a typical (i.e., the same as among civilian women) number of pregnancies among single Navy women, however, is cause for concern if these women become a burden to their command.

⁹The office that tracks pregnancy aboard ships, NMPC-409, reported that 13 percent of the women in ships who had to be reassigned to shore duty because of pregnancy in FY88 were pregnant when they reported to the ship.

The finding that the majority of the pregnancies of unmarried women were unplanned suggests that the pregnancy rate could be reduced if responsible sexual behavior were promoted. Unfortunately, there was no relationship between attending a Navy sex education class and engaging in family planning. Perhaps the fault lies with the Navy class, or perhaps sex education lacks efficacy in reducing unplanned pregnancies. A review of the effectiveness of sex education was conducted as a part of this project. The authors (M. D. Thomas & J. Lawson, 1989) concluded that traditional sex education does not succeed in modifying behavior.

The outcomes of the pregnancies of Navy women were somewhat different from those of their civilian peers. Due to abortion and miscarriage/stillbirth rates that are lower than that of civilians, more of the pregnancies of Navy women result in the birth of a baby.

Navy policies in regards to the management of pregnant women are not well understood or enforced. Less than half of the male first class and chief petty officers are correctly informed about most of these policies, particularly those affecting women in ships. Part of the confusion stems from how these policies are being implemented. Some commanding officers of ships are requesting that pregnant women be reassigned as soon as possible, rather than at the 20th week of their pregnancy. Such actions lead crew members to believe that Navy policy dictates the prompt removal of pregnant women from ships. Lack of information and the possession of incorrect information among supervisors may explain why pregnant women are not being counseled in regards to their enlistment options.

Single Parents

The second purpose of the survey was to determine how many Navy enlisted personnel are single parents. Twenty years ago such a question would not have been asked because when a woman acquired parental status (either through pregnancy or marriage) she was separated from the Navy. The question also would not have been raised in regards to a man, because it was rare for a father to retain custody of his children when parents divorced. Thus, single parents in the military are a relatively new phenomenon.

Very similar proportions of women and men are married and are parents when they enlist in the Navy. A very small percentage are single parents, and more of the women than men had custody of their children. Even the small numbers found in this study are puzzling because a Navy regulation (NAVCRUITCOMINST 1130.8B) does not permit the enlistment of unmarried parents with dependents. One explanation for the paradoxical finding is that the respondents entered the Navy before this regulation was put into effect in 1982. The respondents also may have been confused over the meaning of custody. That is, if the parent had been awarded custody in a divorce action, she/he may have viewed any transfer of responsibility of the child at the time of enlistment as temporary and not the same as relinquishing custody.

In regards to their current status, proportionally more Navy men than women have natural, adoptive, and step-children in their households. Male parents are overwhelmingly married to civilian women, and less than 10 percent of these men are single. By contrast, female parents tend to be married to military men or are single.

The Navy's concern over single parents stems from the conflicting demands such personnel experience. If they are in their first enlistment, the financial strain of living off base, paying for child care, and assuming the other costs associated with children is excessive. Moreover, single

parents are considered to be less flexible in their hours and assignments. In regards to the first problem, the finding that the majority of single parents are in their second or subsequent enlistments was a positive one, due to their maturity and financial resources. A later phase of this research project will address the question of the flexibility of parents, single and married, as compared to other Navy personnel.

Why the proportion of Navy women and men who are single and have custody of their children is more than double that of civilian parents was not explained by the data. Since the birthrate among unmarried Navy women appears to be comparable to that of civilians, this difference does not stem from large numbers of never-married who are having children and remaining in the Navy. Instead, the benefits available to military personnel (medical care, housing allowance, subsidized child care) may make single parenting as a member of the Navy more economically feasible than as a civilian. Anecdotal information provides some support for this theory. The authors have been told that single parents request overseas duty, knowing that regulations require that they remain there for 2 years. Thus, they have the security of a steady income for 2 years or even longer if they reenlist during that period. Another finding that mitigates against unmarried pregnancies being responsible for the single parent rates is the high percentage of previously married women and men among E-6 single parents.

As with the pregnancy policies, the majority of the respondents were not familiar with the fact that single parents can be assigned overseas where accompanying dependents are not authorized. Even more disturbing is the lack of knowledge about and the noncompletion of a Dependent Care Certificate by single parents. Over half of the male single parents had never heard of this form, and only a quarter of the male single parents had an up-to-date one in their service records. The proportions were reversed for women. Together these findings suggest that this policy is being unevenly enforced.

The only question addressing fairness in the management of single parents yielded positive results. The majority of respondents did not think that these parents are getting preferential treatment. In the next phase of this research, favoritism toward parents (married or single) will be investigated.

CONCLUSIONS AND RECOMMENDATION

This research is the first step in a project to investigate the impact of pregnant women and single parents in the Navy upon various Navy systems and on mission accomplishment. Based on the results of this effort the following conclusions are drawn in regards to pregnancy:

1. Navy women are probably getting pregnant at a rate similar to that of their civilian cohorts of the same age. The difference in civilian birthrates by racial membership is not as noticeable in the Navy.
2. The highest pregnancy rates are among women in their first enlistment. Several reasons for this finding were discussed.
3. The pregnancy rate among unmarried Navy women is comparable to that of unmarried civilian women.

4. Navy women have fewer abortions, miscarriages, and stillbirths than civilians, resulting in more live births for pregnancy.

5. Women in ships have lower pregnancy rates than those assigned ashore--a finding that contradicts a wide-spread perception. Being in a sea-intensive versus a shore-intensive rating has no effect on pregnancy rates.

6. The majority of pregnancies are unplanned, and the majority of biological fathers are members of the military.

7. Navy sex education has no effect on pregnancy planning.

8. Navy policies in regards to pregnant women are not well known by male supervisors and, in the case of shipboard policies, not by the women themselves. The requirement to counsel pregnant women as to their military obligations and medical benefits is being complied with about 50 percent of the time.

The conclusions to be drawn from the questions addressing single parents in the Navy follow:

1. The proportion of all Navy enlisted parents who are single is double that found with civilian parents.

2. In terms of percentages, five times as many women as men are single parents. The civilian ratios are six times as many women as men. In terms of actual numbers, there are approximately 14,800 men who are single parents and have legal custody of their children as compared to 6,400 women.

3. Single parenthood is more typical of personnel in their second and subsequent enlistments than among first termers. A great majority of these parents had been previously married.

4. The requirement for single parents to have an up-to-date Dependent Care Certificate in their service records is being poorly and unequally enforced. Half of the women have such a certificate versus a quarter of the men. A majority of the men who should have filed such a form reported that they had never heard of the form.

Based on the initial phase of this 3-year project, one initiative is recommended for action by the Director of Total Force Training and Education. Policies in regards to pregnant women and single parents must be emphasized during enlisted supervisory training. Commanding officers have the responsibility for reviewing the Dependent Care Certificates of single parents and ensuring that pregnant women are counseled. They, too, may need to be reminded of this requirement during leadership or management courses.

REFERENCES

- Beans, H. C. (1975). Sex discrimination in the military. *Military Law Review*, 67, 19-83.
- Bureau of Naval Personnel. (1986, 30 September). *FY86 annual report: Navy military personnel statistics* (NAVPERS 15658 (A)). Washington, DC: Navy Military Personnel Command.
- Bureau of Naval Personnel. (1987, 30 September). *FY87 annual report: Navy military personnel statistics* (NAVPERS 15658 (A)). Washington, DC: Navy Military Personnel Command.
- Carmody, M. D. (1976, 20 August). Memorandum for the Chief of Naval Operations. Subj: *Women in the Navy*. Washington, DC: Naval Inspector General.
- Henshaw, S. K. (1987, January/February). Characteristics of U.S. women having abortions, 1982-1983. *Family Planning Perspectives*, 19(1), 5-9.
- Henshaw, S. K., Forrest, J. D., & Van Vort, J. (1987). Abortion services in the United States, 1984 and 1985. *Family Planning Perspectives*, 19(2), 63-70.
- Hoiberg, A. (1982). *Health status of women in the U.S. military* (NHRC Rep. No. 82-32). San Diego: Naval Health Research Center.
- Kerce, E. W. (1988, April). *A profile of Navy family configurations* (NPRDC Tech. Note 88-40). San Diego: Navy Personnel Research and Development Center.
- Olson, M. S., & Stumpf, S. S. (1978, September). *Pregnancy in the Navy: Impact on absenteeism, attriting, and work group morale* (NPRDC Tech. Rep. 78-35). San Diego: Navy Personnel Research and Development Center.
- Orthner, D. K., & Nelson, R. S. (1980). *A demographic profile of U.S. Navy personnel and families*. Greensboro, NC: Family Research and Analysis, Inc.
- Pamuk, E., & Mosher, W. D. (1988). Health aspects of pregnancy and childbirth, United States, 1982. *Vital and Health Statistics*. Series 23, No. 16. DHHS Pub. No. (PHS) 87-1992. Public Health Service. Washington, DC: U.S. Government Printing Office.
- Pierce, J. O. (1976, 21 September). Point Paper for the Master Chief Petty Officer of the Force. Subj: *Maternity leave for pregnant females while serving on active duty*. Corpus Christi, TX: Naval Air Training Command.
- Price, W. B. (1976, 13 October). Memorandum for the Chief of Naval Personnel, Subj: *Completion of active duty obligation for military members serving in a pregnancy/dependency status*. Spain: U.S. Naval Communication Station.
- Smedberg W. R. IV. (1976, 24 September). Memorandum for the Chief of Naval Operations. Subj: *Involuntary separation of women for pregnancy and parenthood*. Washington, DC: Bureau of Naval Personnel.
- Secretary of the Navy. (1987, 5 December). *Navy study group's report on progress of women in the Navy*. Washington, DC: Department of the Navy.
- Thomas, M. D., & Lawson, J. (1989, June). *The effectiveness of sex education in the United States* (NPRDC Tech. Note 89-23). San Diego: Navy Personnel Research and Development Center.

- Thomas, P. J. (1987, November). *The Navy workweek at selected commands in the United States and overseas* (NPRDC Tech. Note 88-9). San Diego: Navy Personnel Research and Development Center.
- U.S. Department of Commerce. (1987). *Statistical abstract of the United States 1988* (108th edition). Washington, DC: U.S. Government Printing Office.
- U.S. Department of Commerce. (1988, September). *Households, families, marital status, and living arrangements: March 1988* (Current Population Reports Series P-20, No. 432). Washington, DC: U.S. Government Printing Office.
- U.S. Department of Health and Human Services. (1988). *Vital statistics of the United States, 1986 (Vol. 1, Natality)* (DHHS Pub. No. PHS 88-1123). Washington, DC: U.S. Government Printing Office.

APPENDIX A
SURVEY OF NAVY WOMEN

SURVEY OF NAVY WOMEN

The Department of the Navy is reviewing its policies in regard to pregnancy and single parents. With increases in the number of Navy women, the need to better manage the assignment of those who are pregnant has arisen. And, since the number of single parents is higher than ever in the U.S., the Navy also needs to be prepared to manage this change. Before sound policy can be established, however, accurate figures on the number of women who become pregnant each year and for single parents need to be obtained.

Based on a computer program your social security number was randomly selected for a survey of Navy women. The Navy women selected to participate in this survey are representative of the paygrade and rating distribution of all Navy women. Therefore, it is important that you, but no one else, answer these questions. This is an anonymous survey because of its personal nature. Neither your name nor any other identifying information is requested in the survey.

When you have completed this survey, return it in the preaddressed envelope. If you should lose the envelope, the address is at the end of the survey. Thank you for your cooperation.

Privacy Act Statement

Your participation in this survey effort is voluntary. Failure to respond to any question will not result in any action being taken against you, but may affect the conclusions drawn from the survey. The Department of the Navy is granted the authority to conduct personnel surveys in 5 United States Code 301.

Instructions

Carefully read each question and, if it is a multiple-choice, also read all possible answers before choosing your response. Give your answer by either filling in the information asked for or by placing an X on the line in front of your choice. You may write in a response if you feel that none of the answers are right for you. Please be honest in your answers. The only people who will see how you answered the survey are the researchers who will be analyzing the results.

PLEASE FILL OUT THIS SURVEY PROMPTLY AND MAIL IT BACK

1. Age Paygrade Rating
 years months

2. What is your race? (Check one)

Caucasian

Black

American Indian

Asian/Pacific Islander

3. What is your current marital status? (Check one)

Single, never married, and not living with a man

Divorced, separated, or widowed and not living with a man

Living with a man, but not married

Married to a civilian

Married to a man in the military

4. How many of your children under 21 years of age live in your household? (Check one)

None

1 or more List ages starting with oldest

5. What is your current duty location? (Check one answer in each column)

Ashore

CONUS

Not deployed

Afloat

Out of CONUS

Deployed

6. When did you start recruit training?

Date 19
(month)

Age at that time years months

7. Were you married when you joined the Navy?

No	Yes
----	-----

8 a Did you have any of your own children when you joined the Navy?

_____ No (Go to Question 9)

_____ Yes (Please answer Questions 8b and 8c)

b. How many children did you have when you joined the Navy?

_____ Number of children

c. Did you have custody of your child/children at that time?

_____ Yes, I had custody when I entered the Navy.

_____ No, but I received custody later.

_____ No, and I have not had custody since.

9. Since entering the Navy, have you ever attended a sex education course? (If you have attended more than one course, let your answer indicate where you had your most recent course.)

_____ No _____ Yes, at RTC _____ Yes, somewhere other than at RTC

10 a Since entering the Navy, have you ever been a single parent?

_____ No (Go to Question 11)

_____ Yes (Please answer Questions 10b and 10c)

b. During what period were you a single parent while serving in the Navy? (Indicate most recent period, if more than once.)

From _____ 19 _____ to _____ 19 _____
(month) (month)

c. The DON Dependent Care Certificate (OPNAV 1740/1) requires, among other things, that parents name a person who will be temporarily responsible for their children while military parents are TAD for less than 30 days. Since arriving at this command, have you completed a 1740/1?

_____ No, I have never heard of such a form. (Go to Question 11)

_____ No, I have not, but I know that single parents are supposed to fill one out. (Go to Question 11)

_____ Yes, I have completed a 1740/1 since being stationed here. (Please answer Questions 10d and 10e)

d. Who did you name as the person who would be responsible for your child/children if you had to go TAD for less than 30 days?

_____ My child's biological father. (He's in the military, too)

_____ My child's biological father. (He's not in the military)

_____ A relative who lives with me

_____ A relative who lives in another home

_____ An unrelated civilian who lives with me

_____ An unrelated civilian who lives in another home

_____ A military person who lives with me

_____ A military person who lives in another home

e. Do you think that the person you named in the 1740/1 would actually take care of your child/children if required to do so?

_____ Yes, she/he agreed to, and I believe my child/children would be cared for.

_____ Yes, I believe she/he would, but I have never formally asked that person if she/he would.

_____ No, I don't believe that she/he would if it ever came to that.

11. Since joining the Navy, have you adopted any children?

_____ No _____ Yes: How many children? _____

12. Since joining the Navy, have you married someone with a child and claimed that child as your dependent?

_____ No _____ Yes: How many children? _____

The next 4 questions refer only to children that were born to you. Do not include step- or adopted children in your answers.

13. _____ Number of your children that you or your current husband (if any) claim as dependents

14. _____ Number of your children that live with you when you are not deployed

15. _____ Number of your children that someone other than your current husband (if any) claims as dependents

16. _____ Number of your children that have been formally adopted by someone else

The next group of questions refer to current Navy policies regarding pregnant women and single parents. We need to know whether Navy personnel are aware of these policies.

17. Navy women can elect discharge or separation when they become pregnant.

_____ True _____ False _____ Don't know

18 Single parents may be assigned to overseas locations where accompanying dependents are not authorized.

_____ True _____ False _____ Don't know

19 Pregnant women cannot be assigned overseas.

_____ True _____ False _____ Don't know

20 The time that a woman takes off for childbirth is added to the end of her enlistment.

_____ True _____ False _____ Don't know

21 When a woman assigned to a ship becomes pregnant, she is reassigned ashore as soon as possible.

_____ True _____ False _____ Don't know

22 Single parents cannot enlist in the Navy.

_____ True _____ False _____ Don't know

23 Navy women can take a total of 30 days off for childbirth without a special chit from their doctor.

_____ True _____ False _____ Don't know

24 When a woman on sea duty becomes pregnant and is reassigned ashore, she must return to sea duty when the baby is 6 months old to complete her tour.

_____ True _____ False _____ Don't know

25 Women who are discharged from the Navy while pregnant are still eligible to receive medical care through the military in regards to the pregnancy.

_____ True _____ False _____ Don't know

26 Do you believe that single parents at your command receive preferential treatment?

_____ People with dependents cannot be assigned to this command.

_____ No, single parents are treated like everyone else

_____ Yes, but single parents are treated no better than married parents.

_____ Yes, special allowances are made for single parents that aren't made for married parents.

27 At any time since you entered the Navy, have you been pregnant?

_____ Yes, I am now. (Go on to Question 28)

_____ Yes, but I'm not now. (Go on to Question 28)

_____ No, never. (If this block is checked, your survey is over. Skip all remaining questions and mail the survey in the envelope provided. Thank you for participating.)

*28 Please indicate the results of all pregnancies which have occurred since you entered the Navy. Write in numbers to indicate the frequency with which each result occurred

_____ I am now
pregnant

_____ Live
births

_____ Still
births

_____ Miscarriages

_____ Induced
abortions

Since each pregnancy is unique, please answer the following questions carefully and in regards to the specific pregnancy indicated. The first set of questions refers to your most recent or current pregnancy. Then, you will be asked to answer questions about the pregnancies that occurred before the most recent one (if any). Please provide responses in order, whether the pregnancy resulted in childbirth or not.

29 Current or most recent pregnancy:

a. When you became pregnant, what was

Your age: _____ years _____ months Your paygrade: _____ Your rating: _____

The father's age: _____ years _____ months Father's paygrade: _____ Father's rating: _____
(If the father was civilian, write "99" in his paygrade and rating.)

b. Was this pregnancy planned? (Check one)

_____ Yes _____ No

c. What was your marital status? (Check one)

_____ Married when I became pregnant
_____ Single at beginning, but married or will be married before the birth of the child.
_____ Single throughout the pregnancy

d. What was your duty location when you became pregnant? (Check one answer from each column)

_____ Ashore _____ CONUS _____ Not deployed
_____ Afloat _____ Out of CONUS _____ Deployed

*e. When was your command/supervisor notified of your pregnancy? (Check one)

_____ Never _____ 1-3 months _____ 4-6 months _____ later

*f. How long did it take before you received the information counseling (service options and health care) after you notified your supervisor/command of your pregnancy?

_____ Weeks (Write "99" in the blank if you did not receive such counseling.)

g. What is or was the result of that pregnancy? (Check one)

_____ I'm still pregnant _____ Live birth _____ Still birth _____ Miscarriage _____ Induced abortion

h. What type of medical facilities did you use (or are you now using) for prenatal care (before birth)? (Check one)

_____ Navy _____ Other Military _____ Civilian _____ Both _____ None

i. What type of medical facilities did or will you use for childbirth? (Check one)

_____ Navy _____ Other Military _____ Civilian _____ Both _____ None

j. If you are not/did not use Navy medical facilities, why not? (Check the one best answer)

- ☐ Navy policy at the location requires/required getting OB care at another military service's hospital.
- ☐ There is/was not a Navy hospital available in the area.
- ☐ I/he want/wanted to use the hospital of another military service.
- ☐ I/he want/wanted to use a civilian hospital.
- ☐ The pregnancy is/was covered by my husband's civilian insurance policy.
- ☐ Another reason. Please specify: _____

*30 Answer this group of questions for the pregnancy (if any) which occurred just before the one described above in Question 29:

a. When you became pregnant, what was

Your age: _____ Your paygrade: _____ Your rating: _____
 years months

The father's age: _____ Father's paygrade: _____ Father's rating: _____
 years months (If the father was civilian, write "99" in his paygrade and rating.)

b. Was that pregnancy planned? (Check one)

☐ Yes ☐ No

c. What was your marital status? (Check one)

- ☐ Married when I became pregnant
- ☐ Single at beginning, but married at the end of the pregnancy
- ☐ Single throughout the pregnancy

d. What was your duty location when you became pregnant? (Check one answer in each column)

☐ Ashore ☐ CONUS ☐ Not deployed

☐ Afloat ☐ Out of CONUS ☐ Deployed

e. When was your command/supervisor notified of your pregnancy? (Check one)

☐ Never ☐ 1-3 months ☐ 4-6 months ☐ later

f. How long did it take before you received the information counseling (service options and health care) after you notified your supervisor/command of your pregnancy?

☐ Weeks (Write "99" in the blank if you did not receive such counseling.)

g. What was the result of that pregnancy? (Check one)

☐ Live birth ☐ Still birth ☐ Miscarriage ☐ Induced abortion

h. What type of medical facilities did you use for prenatal care (before birth)? (Check one)

☐ Navy ☐ Other Military ☐ Civilian ☐ Both ☐ None

i. What type of medical facilities did you use for childbirth or when pregnancy ended? (Check one)

_____ Navy _____ Other Military _____ Civilian _____ Both _____ None

*31. Answer this group of questions for the pregnancy (if any) which occurred just before the one described above in Question 30:

a. Your age: _____ Your paygrade: _____ Your rating: _____
 years months

The father's age: _____ Father's paygrade: _____ Father's rating: _____
 years months (If the father was civilian, write "99" in his paygrade and rating)

b. Was that pregnancy planned? (Check one)

_____ Yes _____ No

c. What was your marital status? (Check one)

_____ Married when I became pregnant
_____ Single at beginning, but married at the end of the pregnancy
_____ Single throughout the pregnancy

d. What was your duty location when you became pregnant? (Check one answer in each column)

_____ Ashore _____ CONUS _____ Not deployed
_____ Afloat _____ Out of CONUS _____ Deployed

e. When was your command/supervisor notified of your pregnancy? (Check one)

_____ Never _____ 1-3 months _____ 4-6 months _____ later

f. How long did it take before you received the information counseling (service options and health care) after you notified your supervisor/command of your pregnancy?

_____ Weeks (Write "99" in the blank if you did not receive such counseling.)

g. What was the result of that pregnancy? (Check one)

_____ Live birth _____ Still birth _____ Miscarriage _____ Induced abortion

h. What type of medical facilities did you use for prenatal care (before birth)? (Check one)

_____ Navy _____ Other Military _____ Civilian _____ Both _____ None

i. What type of medical facilities did you use for childbirth or when pregnancy ended? (Check one)

_____ Navy _____ Other Military _____ Civilian _____ Both _____ None

Thank you. Please return the survey in the enclosed envelope or mail to:

Navy Personnel Research and Development Center
Attn: PJT Code 621
San Diego, CA 92152-6800

DISTRIBUTION LIST

Distribution:

Chief of Naval Operations (OP-01B), (OP-01W), (OP-13), (OP-14)
Chief, Bureau of Medicine and Surgery (MED-25), Washington, DC
Defense Technical Information Center (DTIC) (2)

Copy to:

Chief of Naval Operations (OP-15)
Director, Human Resources Management Department (NMPC-6)
Executive Secretary, Defense Advisory Committee on Women in the Services (DACOWITS) (35)
Director, Equal Opportunity Management Institute, Patrick Air Force Base, FL (EOMI)