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THESIS

DIVORCE AND FAMILY SUPPORT SERVICES:
PROBLEMS AND PROSPECTS
FOR THE U.S. NAVY

by

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and
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March, 1991

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91 1227 008

91-19136



20000 901 002

REPORT DOCUMENTATION PAGE			
1a. REPORT SECURITY CLASSIFICATION UNCLASSIFIED		1b. RESTRICTIVE MARKINGS	
2a. SECURITY CLASSIFICATION AUTHORITY		3. DISTRIBUTION/AVAILABILITY OF REPORT Approved for public release; distribution is unlimited.	
2b. DECLASSIFICATION/DOWNGRADING SCHEDULE		4. PERFORMING ORGANIZATION REPORT NUMBER(S)	
5. MONITORING ORGANIZATION REPORT NUMBER(S)		6a. NAME OF PERFORMING ORGANIZATION Naval Postgraduate School	
6b. OFFICE SYMBOL (If applicable) Code AS		7a. NAME OF MONITORING ORGANIZATION Naval Postgraduate School	
6c. ADDRESS (City, State, and ZIP Code) Monterey, CA 93943-5000		7b. ADDRESS (City, State, and ZIP Code) Monterey, CA 93943-5000	
8a. NAME OF FUNDING/SPONSORING ORGANIZATION		8b. OFFICE SYMBOL (If applicable)	
8c. ADDRESS (City, State, and ZIP Code)		9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER	
10. SOURCE OF FUNDING NUMBERS		11. TITLE (Include Security Classification) DIVORCE AND FAMILY SUPPORT SERVICES: PROBLEMS AND PROSPECTS FOR THE U.S. NAVY	
12. PERSONAL AUTHOR(S) Wallace, Elizabeth A. and Rose, Kenneth C.		13a. TYPE OF REPORT Master's Thesis	
13b. TIME COVERED From To		14. DATE OF REPORT (year, month, day) 1991, MARCH	
15. PAGE COUNT 183		16. SUPPLEMENTARY NOTATION The views expressed in this thesis are those of the author and do not reflect the official policy or position of the Department of Defense or the U.S. Government.	
17. COSATI CODES		18. SUBJECT TERMS (continue on reverse if necessary and identify by block number) Counseling; Divorce; Family; Family Service Centers; Marriage; Quality of Life Issues; Remarriage; Retention; Support	
FIELD	GROUP	SUBGROUP	
19. ABSTRACT (continue on reverse if necessary and identify by block number) This thesis statistically examines marriage and divorce rates for Navy personnel and compares those rates with all military personnel and with the general U.S. population. In addition, it provides a qualitative evaluation of counseling support services available to Navy people involved in divorce. Specifically, the thesis provides two important pieces of information: the relative frequency of marriage and divorce among Navy people, and a look at the effectiveness of the Navy's primary weapon to fight family dysfunction, the Family Service Center. Results indicate that Navy and military marriage rates are generally lower than overall civilian marriage rates, but two to three times higher among seventeen-to-twenty-year-olds; that divorce rates are lower for military men, but much higher for military women; and that the Family Service Center, while it is an effective method of addressing marital stress and family dysfunction in the Navy, can be improved.			
20. DISTRIBUTION/AVAILABILITY OF ABSTRACT ☒ UNCLASSIFIED/UNLIMITED ☐ SAME AS REPORT ☐ DTIC USERS		21. ABSTRACT SECURITY CLASSIFICATION UNCLASSIFIED	
22a. NAME OF RESPONSIBLE INDIVIDUAL Mark J. Eitelberg		22b. TELEPHONE (Include Area code) (408) 646-3160	
		22c. OFFICE SYMBOL AS/EB	

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Divorce and Family Support Services:
Problems and Prospects
For the U.S. Navy

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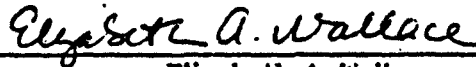
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MASTER OF SCIENCE IN MANAGEMENT

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NAVAL POSTGRADUATE SCHOOL
December 1990

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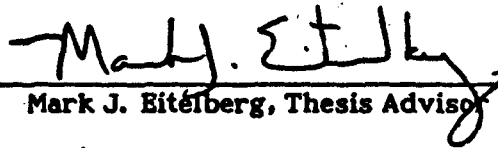


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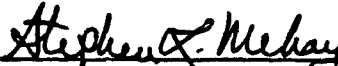


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ABSTRACT

This thesis examines marriage and divorce rates for Navy personnel and compares those rates with all military personnel and with the general U.S. population. In addition, it provides a qualitative evaluation of counseling support services available to Navy people involved in divorce. Specifically, the thesis provides two important pieces of information: the relative frequency of marriage and divorce among Navy people, and a look at the effectiveness of the Navy's primary weapon to fight family dysfunction, the Family Service Center. Results indicate that Navy and military marriage rates are generally lower than overall civilian marriage rates, but two to three times higher among seventeen-to-twenty-year-olds; that divorce rates are lower for military men, but much higher for military women; and that the Family Service Center, while it is an effective method of addressing marital stress and family dysfunction in the Navy, can be improved.



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TABLE OF CONTENTS

I. INTRODUCTION	1
A. THE PROBLEM	1
B. AREA OF RESEARCH	5
C. SCOPE AND LIMITATIONS	6
II. BACKGROUND/LITERATURE REVIEW	8
A. INTRODUCTION	8
B. HISTORICAL PATTERNS OF MARRIAGE AND DIVORCE . .	9
C. STUDIES OF MILITARY MARRIAGE AND DIVORCE . . .	14
1. The Economic, Demographic and Cultural Factors	14
2. Factors Contributing to the Increased Potential for Marital Stress in Military Families	25
3. Linkage of Divorce, Retention and Family Service Centers	33
D. HISTORY OF THE FAMILY SERVICES PROGRAM	39
E. RELATED ISSUES	41
1. Single Parents	43
2. The Uniformed Services Former Spouses Protection Act	52

III. METHODOLOGY AND ANALYSIS	57
A. COMPARATIVE POPULATION STATISTICS	57
1. Data Sources	57
2. Statistical Method	58
B. TREND ANALYSIS	61
1. Comparison of Marital Status'	63
2. Original and Adjusted Marriage Rates	65
3. Comparison of Civilian and Military Divorce Rates	71
4. Comparison of Navy and DoD Divorce Rates Over Time	73
C. THE STATISTICAL EFFECT OF DIVORCE ON RETENTION	81
1. Data	81
2. The Model	82
3. Statistical Method	83
4. Variables	84
D. MODEL ESTIMATION FOR TURNOVER BEHAVIOR	91
IV. FAMILY SUPPORT SERVICES	98
A. SUPPORT SERVICES EVALUATION	98
B. MEASURES OF FSC EFFECTIVENESS	100
C. FSC PROSPECTS AND RECOMMENDATIONS	110
V. CONCLUSIONS AND RECOMMENDATIONS FOR FURTHER STUDY	114
A. CONCLUSIONS	114
B. RECOMMENDATIONS FOR FURTHER STUDY	114

APPENDIX A - MARRIAGE RATES FOR MALE AND FEMALE ACTIVE DUTY ENLISTED FORCES AND THE CIVILIAN POPULATION BY AGE GROUP AND SERVICE CATEGORY (DoD OR NAVY), 1984	119
APPENDIX B - ANNUAL DIVORCE RATES (1982-1986) BY GENDER, AGE GROUP AND POPULATION	121
APPENDIX C - COMPARATIVE MARRIAGE AND DIVORCE RATES FROM FISCAL YEAR 1977 THROUGH FISCAL YEAR 1988	123
APPENDIX D - ADDITIONAL DIVORCE RATE INFORMATION TABLES	125
APPENDIX E - ADDITIONAL MARRIAGE RATE INFORMATION TABLES	134
APPENDIX F - LOGISTIC REGRESSION RESULTS (MODELS 1 AND 2)	143
APPENDIX G - LOGISTIC REGRESSION RESULTS (MODELS 3 AND 4)	144
APPENDIX H - CROSSTABS (INTENT)	145
APPENDIX I - CROSSTABS (DIVORCE)	151

APPENDIX J - CORPORATE SURVEY OF AVAILABLE SUPPORT	
SERVICES	156
 APPENDIX K - PERSONAL COUNSELING QUESTIONNAIRE . . .	
	158
 LIST OF REFERENCES	
	161
 BIBLIOGRAPHY	
	166
 INITIAL DISTRIBUTION LIST	
	169

LIST OF TABLES

Table I	ESTIMATED SINGLE PARENT TOTAL (NAVY), 1980 . .	46
Table II	FISCAL YEAR 1977-1988 DIVORCE RATES (DoD vs. NAVY)	74
Table III	FISCAL YEAR 1977-1988 DIVORCE RATES (DoD vs. NAVY/OFFICER vs. ENLISTED)	74
Table IV	FISCAL YEAR 1977-1988 DIVORCE RATES OF DoD OFFICER PERSONNEL BY POPULATION GROUP AND GENDER .	75
Table V	FISCAL YEAR 1977-1988 DIVORCE RATES OF DoD OFFICER PERSONNEL BY POPULATION GROUP	75
Table VI	FISCAL YEAR 1977-1988 DIVORCE RATES OF DoD ENLISTED PERSONNEL BY POPULATION GROUP	76
Table VII	FISCAL YEAR 1977-1988 DIVORCE RATES OF DoD ENLISTED PERSONNEL BY GENDER AND POPULATION GROUP .	76
Table VIII	FISCAL YEAR 1977-1988 DIVORCE RATES OF NAVY OFFICER PERSONNEL BY POPULATION GROUP	77
Table IX	FISCAL YEAR 1977-1988 DIVORCE RATES OF NAVY OFFICER PERSONNEL BY GENDER AND POPULATION GROUP .	78
Table X	FISCAL YEAR 1977-1988 DIVORCE RATES OF NAVY ENLISTED PERSONNEL BY POPULATION GROUP	79
Table XI	FISCAL YEAR 1977-1988 DIVORCE RATES OF NAVY ENLISTED PERSONNEL BY GENDER AND POPULATION GROUP .	79

Table XII	FREQUENCY OF ENLISTED NAVY RESPONSES TO QUESTION E30 (LIKELIHOOD OF REENLISTMENT), <u>1985 DoD</u> <u>SURVEY OF OFFICER AND ENLISTED PERSONNEL</u>	85
Table XIII	INDEPENDENT VARIABLES	87
Table XIV	NAVY DEMOGRAPHICS, 1989	100
Table XV	FSC CLIENT DEMOGRAPHICS	103
Table XVI	SOURCE OF REFERRALS	103
Table XVII	SUGGESTED MINIMUM STAFFING FOR AN FSC	106
Table XVIII	FISCAL 1989 FSC PERMANENT STAFF SHORTFALLS	107
TABLE XIX	COMPARISON OF FAMILY SERVICE CENTERS WITH EMPLOYEE ASSISTANCE PROGRAMS	110
Table XX	1984 MALE COMPARATIVE MARRIAGE RATES	119
Table XXI	1984 FEMALE COMPARATIVE MARRIAGE RATES	120
Table XXII	1982-1986 MALE ANNUAL DIVORCE RATES	121
Table XXIII	1982-1986 FEMALE ANNUAL DIVORCE RATES	122
Table XXIV	FISCAL YEAR 1977-1988 MARRIAGE RATES	123
Table XXV	FISCAL YEAR 1977-1988 DIVORCE RATES	124
Table XXVI	FISCAL YEAR 1977-1988 DIVORCE RATES (DoD vs. NAVY)	125
Table XXVII	FISCAL YEAR 1977-1988 DIVORCE RATES (DoD vs. NAVY/OFFICER vs. ENLISTED)	125
Table XXVIII	FISCAL YEAR 1977-1988 DIVORCE RATES OF DoD OFFICER PERSONNEL BY POPULATION GROUP AND GENDER	126
Table XXIX	FISCAL YEAR 1977-1988 DIVORCE RATES OF DoD OFFICER PERSONNEL BY POPULATION GROUP	126

Table XXX	FISCAL YEAR 1977-1988 DIVORCE RATES OF DoD ENLISTED PERSONNEL BY POPULATION GROUP	127
Table XXXI	FISCAL YEAR 1977-1988 DIVORCE RATES OF DoD ENLISTED PERSONNEL BY GENDER AND POPULATION GROUP	127
Table XXXII	FISCAL YEAR 1977-1988 DIVORCE RATES OF NAVY OFFICER PERSONNEL BY POPULATION GROUP	128
Table XXXIII	FISCAL YEAR 1977-1988 DIVORCE RATES OF NAVY OFFICER PERSONNEL BY GENDER AND POPULATION GROUP	128
Table XXXIV	FISCAL YEAR 1977-1988 DIVORCE RATES OF NAVY ENLISTED PERSONNEL BY POPULATION GROUP	129
Table XXXV	FISCAL YEAR 1977-1988 DIVORCE RATES OF NAVY ENLISTED PERSONNEL BY GENDER AND POPULATION GROUP	129
Table XXXVI	FISCAL YEAR 1977-1988 DIVORCE RATES OF NAVY ENLISTED MEN BY POPULATION AND AGE GROUP	130
Table XXXVII	FISCAL YEAR 1977-1988 DIVORCE RATES OF NAVY ENLISTED WOMEN BY POPULATION AND AGE GROUP	131
Table XXXVIII	FISCAL YEAR 1977-1988 DIVORCE RATES OF NAVY MALE OFFICERS	132
Table XXXIX	FISCAL YEAR 1977-1988 DIVORCE RATES OF NAVY FEMALE OFFICERS BY POPULATION AND AGE GROUP	133
Table XL	FISCAL YEAR 1977-1988 MARRIAGE RATES (DoD vs. NAVY)	134
Table XLI	FISCAL YEAR 1977-1988 MARRIAGE RATES BY SERVICE AND RANK	134
Table XLII	FISCAL YEAR 1977-1988 MARRIAGE RATES OF DoD OFFICER PERSONNEL BY GENDER AND POPULATION GROUP	135

Table XLIII	FISCAL YEAR 1977-1988 MARRIAGE RATES OF DOD OFFICER PERSONNEL BY POPULATION GROUP	135
Table XLIV	FISCAL YEAR 1977-1988 MARRIAGE RATES OF DOD ENLISTED PERSONNEL BY POPULATION GROUP	136
Table XLV	FISCAL YEAR 1977-1988 MARRIAGE RATES OF DOD ENLISTED PERSONNEL BY GENDER AND POPULATION GROUP	136
Table XLVI	FISCAL YEAR 1977-1988 MARRIAGE RATES OF NAVY OFFICER PERSONNEL BY POPULATION GROUP	137
Table XLVII	FISCAL YEAR 1977-1988 MARRIAGE RATES OF NAVY OFFICER PERSONNEL BY GENDER AND POPULATION GROUP	137
Table XLVIII	FISCAL YEAR 1977-1988 MARRIAGE RATES OF NAVY ENLISTED PERSONNEL BY POPULATION GROUP	138
Table XLIX	FISCAL YEAR 1977-1988 MARRIAGE RATES OF NAVY ENLISTED PERSONNEL BY GENDER AND POPULATION GROUP	138
Table L	FISCAL YEAR 1977-1988 MARRIAGE RATES OF NAVY ENLISTED MEN BY POPULATION AND AGE GROUP	139
Table LI	FISCAL YEAR 1977-1988 MARRIAGE RATES OF NAVY ENLISTED WOMEN BY POPULATION AND AGE GROUP	140
Table LII	FISCAL YEAR 1977-1988 MARRIAGE RATES OF NAVY MALE OFFICERS BY POPULATION AND AGE GROUP	141
Table LIII	FISCAL YEAR 1977-1988 MARRIAGE RATES OF NAVY FEMALE OFFICERS BY POPULATION AND AGE GROUP	142
Table LIV	EFFECT OF DIVORCE EXPERIENCE ON REENLISTMENT PROPENSITY (NAVY ENLISTED PERSONNEL)	143
Table LV	EFFECTS OF VARIOUS MARITAL STATUS' ON REENLISTMENT PROPENSITY (NAVY ENLISTED PERSONNEL)	144

Table LVI	INTENT BY PRESENT MARITAL STATE	145
Table LVII	INTENT BY ONSHIP	146
Table LVIII	INTENT BY GFNDER	147
Table LIX	INTENT BY RACE	148
Table LX	INTENT BY DIVORCE	149
Table LXI	INTENT BY REMARRY	150
Table LXII	DIVORCE BY RACE4 (RACE/ETHNIC GROUP) . .	151
Table LXIII	DIVORCE BY ONSHIP	152
Table LXIV	DIVORCE BY GENDER	153
Table LXV	DIVORCE BY RACE	154
Table LXVI	DIVORCE BY SCHOOL	155

I. INTRODUCTION

A. THE PROBLEM

During the military growth years of the Reagan administration, military manpower planners had the luxury of being able to approximate the required quantity and quality figures as the armed services grew in size and national priority. However, in the current climate of shrinking budgets and the anticipated drawdown of the military, the luxury of approximation has given way to the increasingly important issues of optimum force composition, quality mix, and quality of life.

Once personnel quality and quantity decisions have been made, military manpower planners have several means at their disposal to achieve the desired force composition. Of the varying methods of personnel manipulation, perhaps the greatest attention has been directed towards retention. Numerous studies have focused on the military issues or demographic characteristics that influence the reenlistment propensity of both first-term and career personnel. Of the economic and demographic factors considered to have significant effects on an individual's reenlistment decision, one of the most interesting is marital status.

A military member's marital status is a unique factor in that it reflects both an economic and a demographic influence. This combination of influences exists because of the economic benefits, both pecuniary and non-pecuniary, gained by the military member when dependents are acquired. Dependents can be either a spouse, a child, or a financially dependent relative. The benefits of having dependents include increased income, separation allowances, Basic Allowance for Quarters (BAQ) computed at the "with dependents" rate, Variable Housing Allowance (VHA), and non-pecuniary benefits such as eligibility for government housing, low-cost or free medical care and commissary and exchange shopping privileges. Marital status also becomes a unique factor because of the variety of combinations that further define an individual's family status. These household combinations include singles with no dependents, singles with dependents, and service members married to civilians or to other service members with varying numbers of minor dependents. As within the civilian community, military members may also experience multiple divorces and subsequent remarriages.

To date, retention studies that consider the effect of marital status on retention have only categorized an individual as married or single. [Ref. 1] For example, a 1984 study by John T. Warner and Matthew S. Goldberg examined some of the non-pecuniary factors affecting the retention of Navy enlisted personnel. Their study

concluded that married individuals have a higher propensity to reenlist [Ref. 2]. However, lumped within their category of single personnel were individuals who could be better categorized as either single, never-married or single, divorced. With this reclassification in mind, the conclusion that single individuals have a lower propensity to reenlist raises several questions: do divorced singles have a correspondingly lower propensity to reenlist? Do single, twice-divorced individuals have an even lower propensity to reenlist? Do married, previously divorced individuals have a correspondingly higher propensity to reenlist?

If the assumption is made that "married is better" where reenlistment potential is concerned, analysts and manpower planners may be motivated to favor policies or programs designed to promote increased marriage rates and marital stability, as well as to support efforts to decrease the propensity of divorce. Combining divorced singles and never-married singles in the same category for purposes of simplifying quantitative analysis may create a problem: namely, that the true effect of marital status on retention may not be accurately presented. The possibility exists that divorced individuals may, in fact, have a higher propensity to reenlist than their married counterparts. While issues such as family separation, lack of recognition and stressful working conditions are being studied carefully, there have been no quantitative studies that have analyzed the nature of

divorce in the Navy or that determine the effect of an individual's divorce status on a reenlistment decision.

An issue related to the question of divorce and its impact on Navy retention is the Navy's effort to provide timely, effective family counseling to members and their spouses who may be contemplating divorce. If divorce is considered to have a negative impact on retention--an assumption that is intuitively and generally accepted by most manpower analysts, but one that has yet to be statistically confirmed--it is logical to question the effectiveness of efforts to reduce divorce in the Navy. A qualitative analysis of the Navy's primary provider of counseling services, the Family Service Center (FSC), has not been documented since the program's inception in 1979. Given the role of the FSC as the "main battery" in the Navy's counseling arsenal, it is appropriate to evaluate the program.

Initially, the two topics addressed in this thesis--a comparative statistical analysis of divorce rates and a qualitative study of the Family Service Center--were separate research projects. They have been combined so that both issues may be addressed more effectively. The statistics define the nature and extent of a perceived problem, while the assessment of FSCs is directed at the capability of centers to address the problem.

B. AREA OF RESEARCH

This thesis is exploratory in nature. Proposing a "bottom line" conclusion that marriage and divorce rate differentials and Family Service Center effectiveness are directly related is tempting, but such a conclusion risks oversimplification. It ignores a multitude of other factors critical to marriage and divorce decisions. Instead, the thesis attempts to supplement a growing body of research in the area of family support, giving manpower analysts important additional pieces of information: statistics indicating the relative frequency and nature of marriage and divorce among Navy personnel, an initial estimate of the effect of divorce on retention, and a look at the effectiveness of the FSC as the Navy's primary weapon in fighting family dysfunction. It attempts to compare marriage and divorce rates of Navy personnel with those of all other services, and with the general population of the United States, and to determine the nature of the differences. As a related issue, the thesis examines the quality of support service available to a Navy person contemplating a divorce.

The data used to analyze civilian marital status and divorce rates were obtained from the U.S. Bureau of the Census. Military marriage and divorce rates were obtained from enlisted and officer personnel files provided by the Defense Manpower Data Center (DMDC). Correlation and multivariate regression techniques were used to explore the

relationships between the decision to reenlist and marital status.

Evaluation of the quality of support provided by Family Service Centers is based on several factors: the availability of services; the funding level of FSCs; FSC staff qualifications; and a comparison of FSCs with their civilian equivalents, Employee Assistance Programs (EAPs).

C. SCOPE AND LIMITATIONS

The thesis addresses two major research questions:

- Is there a significant difference between the marriage and divorce rates of Navy people, the other services, and the general U.S. population?
- How good are the support services available to Navy people contemplating a divorce?

Since the 1978 Navy-wide Family Awareness Conference held in Norfolk, Virginia, manpower analysts have focused considerable effort on developing better ways to measure the impact of various quality-of-life issues and initiatives on retention and readiness. This thesis complements those efforts. By providing marriage and divorce statistics specific to Navy personnel, a preliminary analysis of the relationship between divorce and retention, and a look at the effectiveness of the Navy's Family Service Centers, the manpower community will be better able to address the issue of divorce.

In an attempt to maintain the scope of the thesis at a manageable level, peripheral issues not directly related to the primary research questions have been discussed, but have not been thoroughly analyzed. Specifically, the issues of single parents in the Navy and the Uniformed Services Former Spouses Protection Act have been addressed. Although recognized as important personnel issues, they do not affect either the statistical comparison or the qualitative evaluation of Family Service Centers, the two primary goals of this research.

II. BACKGROUND/LITERATURE REVIEW

A. INTRODUCTION

The importance of understanding patterns of military divorce and their potential impact on Navy retention and the role of the Family Service Center (FSC) becomes increasingly pertinent when one considers the changing face of personnel demographics and military manpower policy over the past fifty years. Current research has explored the differences between military and civilian life with an eye on the factors that serve to increase the divorce potential for military families. According to sociologist Mady W. Segal,

As institutions, both the military and family make great demands of the service member in terms of commitments, loyalty, time and energy. Due to various social trends in American society and in military family patterns, there is greater conflict now than in the past between these two "greedy" institutions. [Ref. 3]

Segal also contends that

the current competition between the military organization and the family is occurring in a period of such social change, without an established normative pattern, that it will lead to new normative patterns for resolving the conflicts. [Ref. 4]

An examination of several issues--the historical patterns of marriage and divorce in the civilian and military populations, previous studies of military marriage and divorce, and the response of the Navy to these issues--will

provide a basis for the analysis of the Navy's divorce "problem."

B. HISTORICAL PATTERNS OF MARRIAGE AND DIVORCE

The patterns of marriage and divorce in the United States have changed dramatically over the past decades. At the turn of the century, civilian men married at an average age of 26. By 1957 it reached the lowest average ever recorded; the median marriage age for men, the age at which half of all men had married, dropped below 21. Rising standards of living in the U.S. had made it possible for young people to become self-sufficient at an earlier age. [Ref. 5]

Between 1970 and 1988 the trend in early civilian marriages declined. The proportion of young men between the ages of 18 and 30 who were married fell from 50 to 32 percent [Ref. 6]. Paradoxically, the Navy has not followed this recent downward trend in early marriage. In fact, in 1989, 50 percent of all active-duty personnel were married; 80 percent of careerists were married, including 48 percent of all enlisted personnel and 75 percent of officers [Ref. 7].

The Navy's upward trend in marriage rates has been the result of three factors: the changing composition of the officer population, the downward shift in the average civilian marriage age, and increasingly family-oriented manpower policies.

From the outset of World War I, the Navy consisted of single enlisted sailors, recruited from a population which married considerably later, and a caste-like officer corps who commonly selected wives from among the daughters of previous generations of Annapolis graduates. By 1955, over a third of the Navy's enlisted men as well as three-quarters of the officers were husbands instead of bachelors. [Ref. 8]

The tremendous expansion of the armed forces in World War II was accomplished, in part, by increasing the numbers of officers procured from university Reserve Officer Training Corps (ROTC) programs. This Navy policy shift away from an officer corps previously composed of mostly Annapolis officers may have initially served to increase the conflict between families and the military. It resulted in an increased proportion of new military wives who had not been raised by military fathers, and who were not experienced in the hardships of the military lifestyle. [Ref. 9]

According to the Army Times, "the influx of married military members in the 1950s and 1960s coincided with the need to retain good recruits." [Ref. 10] The same Army Times article quotes Elijah "Wilkie" Wilkerson, Chief of the Army Housing Office, as saying:

The services started thinking about quality of life. Then they started thinking about caring for the family. They felt if they did, they would attract and retain better soldiers. [Ref. 11]

While the civilian trend toward early marriage declined dramatically in the 1970s, Navy individuals continued to marry

more and at a younger median age. Sociological researchers

Elwood and Ruth Carlson echo Wilkerson's observations:

The reasons for this rapid expansion of marriage within the ranks of the Navy, during a decade which saw a trend away from marriage among young adults in the general population, lay in the policies adopted to try and meet the recommendations of the Gates Commission. Even before the All-Volunteer era, all branches of the American military had been moving in the direction of an increasing familistic manpower policy. Medical care, post exchanges, and housing for which families received priority, all were aimed at attracting and retaining an increasingly married population of young adults in the military. [Ref. 12]

As military marriage rates increased during the seventies, marriage rates among the general population declined. The decline was paralleled by a "divorce craze" with the number of divorces nearly doubling between 1970 and 1980 [Ref. 13]. A 1975 study by Sheila Kessler found that the numbers of marriages and divorces are directly related. She states that, "...from a correlation of the marriage and divorce rates of each year since 1920, the two (marriage and divorce rates) are significantly related." [Ref. 14] It is also estimated that "over one-half of all marriages end in divorce today" [Ref. 15]. Because the Navy marriage rate is significantly higher than the civilian rate, one could easily draw the conclusion that divorces among Navy personnel might also become more prevalent.

The nature of marriage and divorce trends since the mid-seventies are of particular importance to this thesis.

Figures 1 and 2 illustrate the relative annual Navy, military, and civilian marriage and divorce rates for 1977 through 1988. The marriage rate is defined by the U.S. Bureau of the Census as the proportion of the entire population who married during the year.

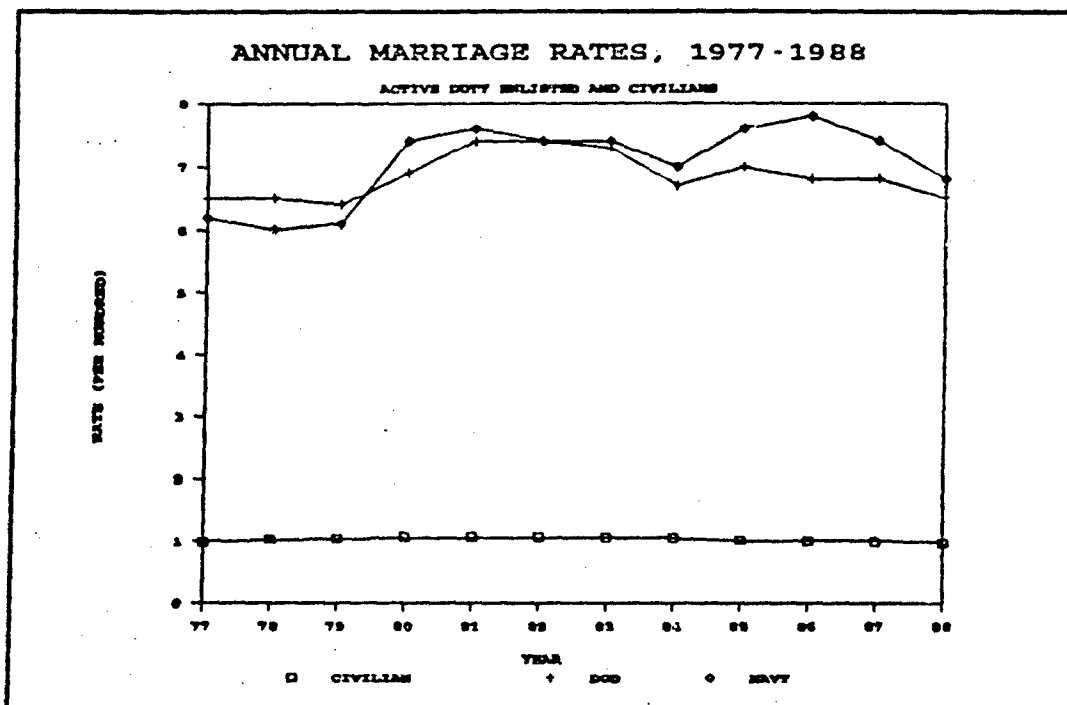


Figure 1 Fiscal Year 1977-1988 Annual Marriage Rates (Active Duty and Civilians)

Source: U.S. Census Bureau

The marriage rates in Figure 1 for civilians appear to be relatively stable, with approximately one percent of the eligible population marrying annually. The military rates fluctuate, but remain significantly higher, consistent with the patterns established in the early 1970s.

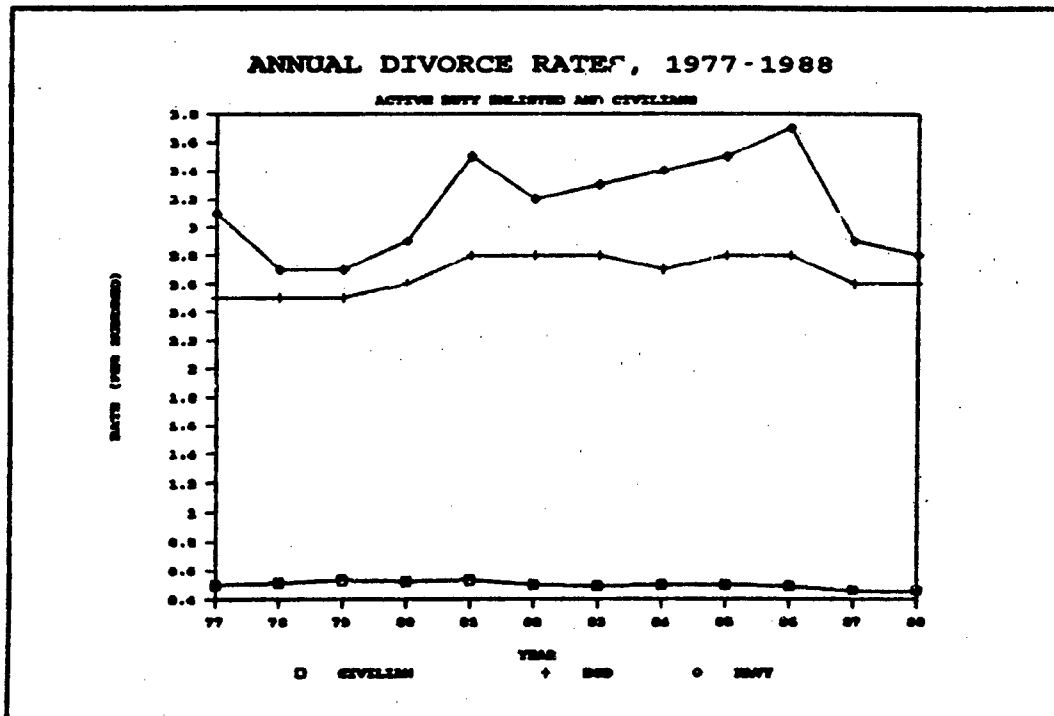


Figure 2 Fiscal Year 1977-1988 Annual Divorce Rates (Active Duty Enlisted and Civilians)

Source: U.S. Census Bureau

Similarly, the civilian divorce rate in Figure 2 remains relatively stable while the military rates, especially the Navy rate, fluctuate and are markedly higher. With the implementation of the All-Volunteer Force in 1973, and the increasing movement of the military toward an occupational format--that is, increased emphasis on the military as a job, rather than a life-threatening, 24-hour-a-day commitment-- [Ref. 16], young people enlisted expecting to enjoy a relatively similar quality of life as their civilian counterparts [Ref. 17]. The figures clearly show differences in the marriage and divorce rates of the military

and civilian populations. The remaining tasks are to further analyze the differences, determine the causes, and examine the impact of divorce on the Navy.

C. STUDIES OF MILITARY MARRIAGE AND DIVORCE

While there is ample research that addresses the effects of divorce on the general populace, very little is written about its effect on individual service members and the military as an institution. Most military research to date has examined the nature of marriage and family life in the military. These studies place growing emphasis on the importance of quality-of-life issues and the influence wielded by the family when the service member faces the reenlistment decision. With this perspective in mind, we will review the economic, demographic and cultural factors that may influence a service member's decision to marry or divorce, and the aspects of military life that contribute to the increased potential for marital stress.

1. The Economic, Demographic and Cultural Factors

Generally, individuals in the military marry and divorce for all the same reasons as individuals who are not in the military. The purpose of this thesis is not to elaborate on those reasons, but to examine what factors may be at work that are unique to the military and specifically to the Navy. In other words, to look at factors which serve to increase the

propensity of Navy people to marry and divorce, relative to the general population and to other services.

Fluctuations in the military marriage rate have been attributed to several factors: the influence of manpower policy changes, the increasing age and rank structure of a more career-oriented military, and military pay [Ref. 18]. It has also been suggested that the anomaly of the increasing rate of marriage among the young enlisted ranks--changes which run directly counter to national trends in the same age group--may be the result of "recruiting disproportionately from a subpopulation with a propensity to marry young" [Ref. 19].

A unique economic perspective of the costs and benefits of marriage and divorce was presented by Tullock and McKenzie in 1985. Assuming a degree of rationality of behavior with regard to marriage, they believe that both men and women are out to maximize their utility--utility being defined as "...an individual's perception of his or her own satisfaction" [Ref. 20]--when choosing a spouse. As the authors point out:

Each individual then addresses two fundamental questions: (1) what are the costs and benefits in general of being married as opposed to remaining single; and (2) given these benefits and costs, how long or hard should he or she search for an appropriate mate? [Ref. 21]

According to Tullock and McKenzie, one of the costs of marriage is, to a certain degree, a loss of independence. Married individuals must consider the effects their actions

have on the family unit, whereas singles need only consider their own preferences [Ref. 22]. Unless the individuals belonging to the family unit have the exact same tastes, goals and desires, their ability to make mutually-acceptable choices--thus ensuring a household of reasonably satisfied individuals--is highly dependent upon their ability to communicate successfully. Communication problems were listed as the primary reason for divorce among respondents to a 1983 survey of divorced Navy members [Ref. 23].

Other costs associated with marriage are the decreased amount of time each spouse can spend with their individual, rather than mutual, friends, the potential for an inequitable distribution of household chores, and the loss of the opportunity to date or even marry someone else who may otherwise be a more desirable spouse [Ref. 24].

The ultimate opportunity cost of foregoing other relationships with individuals who may be more compatible could be substantial in the case of military personnel. The frequency of geographic moves, changes in assignments and the influx of other personnel into any given command greatly increase the number of social contacts available to service members relative to their civilian counterparts. The longer individuals remain in this "revolving-door" environment, the greater their chance of meeting one, or even several, individuals who they may believe are more compatible than their current spouse. These increased social opportunities

may result in either increasing or decreasing frequency of marriage and divorce for military and civilian individuals. The military member may display an increased propensity for marrying and divorcing more than once, longer periods between divorce and remarriage (because of the increased "cost" of giving up their independence), or shorter periods between the two due to increased social opportunities.

From an economic perspective, according to Tullock and McKenzie, "the benefits of marriage and family are two-fold: spouses have the opportunity to produce things not readily duplicated in non-marriage situations, and the family operating as a single household can produce many goods and services more efficiently than can several single-person households." [Ref. 25] The list of "things" produced within a marriage situation includes "...children, prestige and status that can affect employment and the realm of friends, companionship that is solid and always there, a family-styled sex life...and family life in general." [Ref. 26]

While military families do in fact enjoy these benefits, the military provides other economic benefits that undoubtedly influence an individual considering marriage. Single enlisted personnel are generally required to live in on-base, barracks-type housing, especially at overseas installations. Junior enlisted personnel (E-4 and below) can usually expect to share living quarters with up to three

others in a quad-like setting. Relative to the accommodations available to their civilian counterparts, which are not subject to surprise inspections or lacking in personal choice over roommates, junior enlisted appear to be at a decided disadvantage. Marriage, even if only one of convenience, often offers a workable solution. Not only does the marriage of a junior enlisted individual make them eligible to live in off-base housing, it entitles them to increased housing allowances and separation pay should they deploy. According to the Army Times, "the advantage for married members is greatest at the junior enlisted grades where housing allowances comprise a larger share of a military member's overall compensation." [Ref. 27] Using 1991 figures, the difference in married and single pay and allowances, not including the Variable Housing Allowance (VHA), approaches 14 per cent more in untaxable income for some junior enlisted personnel. Given these inducements, we anticipate the highest rates of military marriage to exist in the younger age groups, especially among enlisted personnel.

Relative to the civilian population, specifically those in the labor force, the demographic composition of the military population is very different. Figure 3 illustrates the comparative age distributions of the two populations. The Navy is obviously younger. Other differences, not shown in Figure 3, include the male-female ratio and racial composition. Only 14 percent of the military is female, while

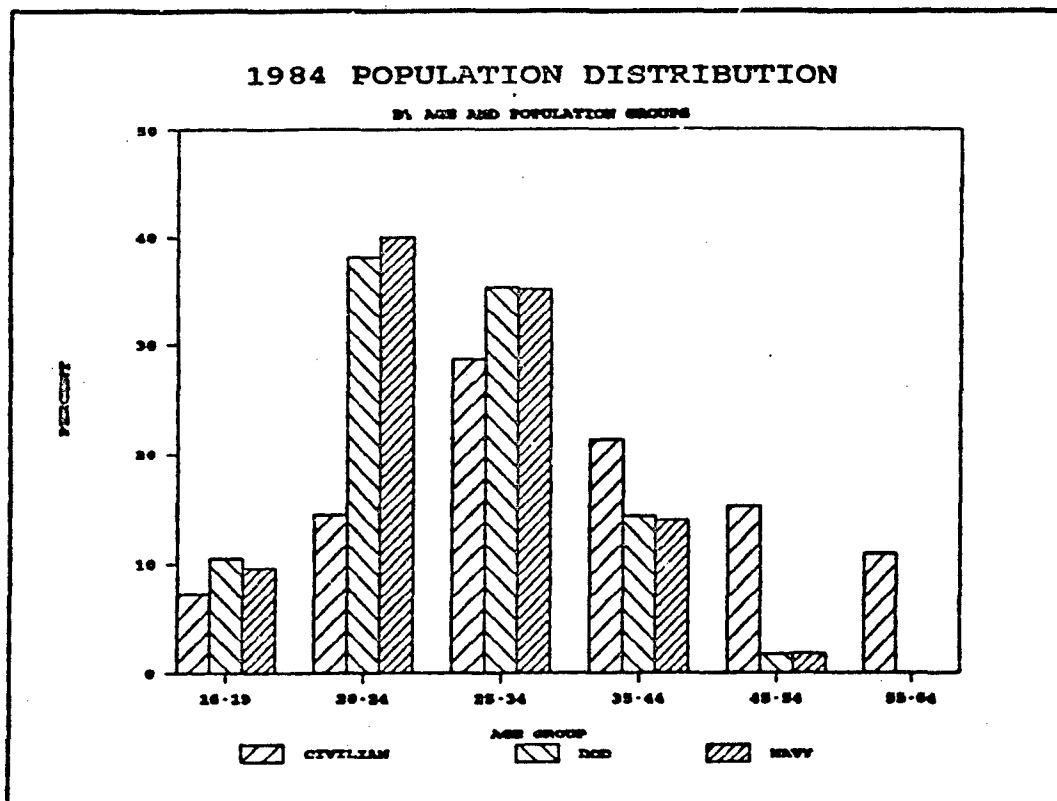


Figure 3 Fiscal Year 1984 Population Distribution (by Age and Population Group)

Source: U.S. Census Bureau and Defense Manpower Data Center

the civilian work force is approximately 50 percent female. Due to such demographic differences, it is reasonable to anticipate differences in marriage and divorce rates.

Another factor which may influence a military individual's decision to marry, and the length of time devoted to the search for a spouse, is the attitude toward time. Individuals raised during the 1970s and 1980s have acquired a reputation for belonging to the "me" generation, possessing a higher desire for immediate gratification than previous

cohorts. This attitude was somewhat quantified in two AVF-era studies that looked at effects of the Selective Reenlistment Bonus (SRB) on retention of first-term and career enlisted personnel [Ref. 28] [Ref. 29]. These studies utilized a four-year time horizon when calculating the present discounted value of pay over the next four years (also the average term of reenlistment). Cymrot points out that "one could argue that personnel use current pay as a crude proxy for future pay...(but that it implies) too high a discount rate on the part of personnel." [Ref. 30]

Warner and Goldberg utilized the same four-year time horizon. They found evidence that a discount rate--the rate at which the present value of money received in the future is calculated--of ten percent was too low for first-term enlistees facing the reenlistment decision [Ref. 31]. These conclusions indicate that first-term personnel have a higher discount rate--are more present-oriented--than career personnel, whose discount rate appears to decrease as they approach twenty years of service. Retirement benefits appear to be the prime motivator for careerists.

Thus, a number of incentives and factors combine to influence service members' marriage and divorce decisions. It seems safe to conclude the tendency for younger marriages in the Navy than in the civilian population is the result of recruiting from a sub-population that possesses the characteristics that foster such behavior.

In recent years, in an effort to stimulate recruiting for the AVF, the military has offered cash bonuses for enlistment in specific job areas, two-year active duty contracts (as opposed to the more standard four-year commitment), and increased money for college programs. These enlistment "enhancers" appear to be aimed at individuals with a propensity to be more oriented to the present than the future. If we combine the potential effects of these recruiting methods with the observation that marriage rates for Navy and Marine Corps junior enlisted personnel fluctuate relative to changes in military pay [Ref. 32], then perhaps the sub-population entering the military is strongly influenced by the immediate benefits gained from marriage. Individuals with a present-oriented attitude may be less likely to put forth much time in the search for the "best" spouse and may generally make more wrong choices.

Changes in manpower policies over the past decades, while generally aimed at increasing retention rates, have also influenced marriage rates. Anne O'Keefe, senior policy advisor in the Office of the Deputy Assistant Secretary of the Navy (DASN), Force Support and Families, told Army Times that she believes military policies may inadvertently encourage troops to marry and have children "without thinking it through." She cited family support programs, as well as pay and housing policies that favor married members, as enticements to marriage and parenthood [Ref. 33].

The belief that military policies contribute to an increased marriage rate and early parenthood is shared by many. Dennis Orthner, a professor at the University of North Carolina who researches military family matters, calls housing and pay policies "fertility stimulants" which motivate people to have children at a young age. He told the Army Times that

early marriage and parenthood rates lead to unstable marriages and divorces, which inhibit readiness. It's a counterproductive system. [Ref. 34]

Increased marriage and divorce rates obviously create problems for the military. Marine Corps Brigadier General James Myatt, director of the USMC Manpower, Plans and Policy Division, says that the increasing number of dependents is "driving up the cost of manpower...the cost of health care...the cost of family support centers." [Ref. 35]

Just as increased marriages present certain "costs" to the military, so do increased divorces. The divorce of a military member, while a highly personal and emotionally-charged event for the individual, implies three significant "problems" for the Navy in the areas of decreased productivity, unit readiness, and retention.

If we apply the assumption that individuals in the military are representative of the general population, given the fact that we have had all-volunteer services for over 15 years, then we should find that the same factors influencing divorce rates in the general U.S. population are also reflected in the military.

The question of "who" divorces was addressed for the general population in a 1975 survey. Kessler found that there was no "typical" divorcee, but there were some identifiable trends according to gender, socioeconomic class, occupation, and geographic location at the time of divorce. The study indicated that the "lower" socioeconomic classes divorced more frequently. Men in traditional blue-collar occupations--household workers, craftsmen, foremen, service workers, clerical workers and laborers--divorced more frequently, while the lowest percentages occurred among male accountants, auditors, college professors, draftsmen, personnel and labor-relations workers, physicians and surgeons, and secondary school teachers. The inverse of this occupational correlation seemed to be true for women. As Kessler observes:

The higher on the occupational status scale, the greater the tendency (women displayed) towards divorce. In the professional field, the statistics for women were opposite to men. Female accountants, editors and reporters, personnel and labor-relations workers have outstripped the other fields in divorce rates by far. [Ref. 36]

If these gender-related occupational trends in divorce carry over into the Navy, they could explain much of the rise in the military divorce rates.

Military researcher, Mark J. Eitelberg, has observed:

A relatively great shift in military occupational functions took place within the two decades preceding World War I, as the proportion of the "white collar" force tripled to almost 12 percent and the proportion of personnel in general military skills fell from 87 percent to just over 40 percent. By the end of the Second World War, one out of four enlistees was serving in a white

collar job and one out of three was assigned to a general (or combat) skill. [Ref. 37]

Since 1972, there has been only a moderate shift in the distribution of military occupations for Navy enlisted personnel. According to Eitelberg,

...the percentage of "unskilled" or "blue collar" occupations fell from 20.6 percent in 1972 to 18.6 percent in 1984; "semi-skilled (a category including Medical and Dental Specialists, Functional Support and Administration, and Electrical/Mechanical Equipment Repairers) decreased slightly from 52.3 percent to 51.7 percent; with the percentage of "skilled" personnel rising from 27.1 percent to 29.7 percent. [Ref. 38]

A 1984 breakdown of male enlisted personnel for all services by occupational category was 28.9 percent white collar, technical workers; 15.1 percent white collar, clerical workers; 28.1 percent blue collar, craftsmen; 10.5 percent blue collar, service and supply workers; and 17.4 percent general military skills. [Ref. 39]

Assuming the findings of the 1975 study by Kessler hold true for the military population, we would expect to find that enlisted women will have a proportionately higher divorce rate than enlisted men because they fill a higher percentage of white collar technical and clerical occupations. For the same reasons, we may also expect that women officers will have higher divorce rates than enlisted women. However, this expectation may be offset by the assumption that women officers, being generally better educated, may make better initial spousal choices based on a more thorough analysis of the costs and benefits of marriage and divorce.

Kessler's study also found a geographically associated tendency for divorce rates to rise, moving from East to West,

and again from North to South. This trend was attributed to the more liberal divorce laws in the West at that time. [Ref. 40] Additionally, she indicated that certain religious beliefs and the presence of extended families tended to discourage high regional divorce rates in New England [Ref. 41].

2. Factors Contributing to the Increased Potential for Marital Stress in Military Families

Sociologists in the civilian population are just beginning to publish substantive findings regarding the causes of divorce. According to Lynn K. White, author of a review of divorce research conducted during the 1980s, "two-thirds of all first marriages in the United States will end in divorce." She also states that

...high divorce rates are not a period phenomenon of the 1970s or a cohort phenomenon of the baby boom generation...high levels of divorce seem to have become a standard part of American family experience. [Ref. 42]

We will examine, based on the determinants of divorce previously considered, the aspects of military service, particularly in the Navy, that appear to affect military families and increase the potential for divorce among its members.

Military service imposes tremendous changes upon the lifestyle of the unwary civilian. The first indication of those changes, especially for enlisted men, is the quarter-

inch of hair remaining after their initial haircut in recruit training.

Recruit training, six to twelve weeks in length, depending on the particular branch of service, serves as the individual's initial transition between civilian and military lifestyles. This period is used by the military as a screening tool to weed out those individuals who are physically, mentally or socially unfit for military service. Normative constraints for service members include learning to follow orders, and to understand and comply with a multitude of rules and regulations. The Uniform Code of Military Justice (UCMJ), a codification of the basic laws of military life, which affects the military member 24 hours a day, is one significant example of a new normative constraint which must be understood and accepted by the recruit.

The initial term of enlistment also serves as an evaluation period for both the member and the service. Whether the member remains in the service depends largely upon the ability to perform assigned tasks in an acceptable manner, the extent to which they conform to service rules and regulations, and the extent to which the member adjusts to the characteristics of military life.

When service members marry, their families are also affected by some of the unique characteristics of military life; specifically, geographic mobility (including overseas residency), the risk of injury or death of the service member,

periodic separations, and normative pressures regarding their roles in the military community. Each of these factors affect service members and their families to some extent, and create the potential for increased marital stress. Mady W. Segal defined these four factors of military life which create increased marital stress, and identified certain categories of families--junior enlisted families, dual-service couples and families with active-duty mothers (where husbands are civilians)--as being at greater risk because those families were more "greedy" for their military members than the traditional military family, one composed of a military husband and civilian wife. [Ref. 43]

The increased geographic mobility of military families relative to civilians may indicate a higher propensity for divorce among military families for several reasons. While some in the military consider the opportunity to travel a benefit, most experience it as a hardship. The hardships of frequent moves include the general adjustments made by any family; establishment of a new social support system, finding one's way around a new town (or country), and adjustment to regional dialects or cultural differences. The difficulties children experience in adjusting to a new location can vary, depending upon their ages. School-age children and teenagers are particularly vulnerable; lack of standardized curricula across the nation may cause gaps or repetition in education,

and the disruption of peer relationships may be particularly stressful during adolescence. [Ref. 44]

Aside from the stress created by general adjustments associated with moving, military families, especially those in the Navy, may be at greater risk of divorce because of the synergistic effect of geographic mobility, recent trends in divorce laws, and labor force participation rates.

While there is little evidence that the shift from fault to no-fault divorce has raised U.S. divorce rates [Ref. 45], the relative ease of obtaining a divorce, and differences in the award of child custody and property settlements, varies significantly from state to state. The state in which the military family resides will influence the perceived "cost" of divorce. Broeker's survey of divorced Navy personnel reflected that the highest percentage (19.6%) of reported divorces occurred in California, followed by Florida (15%), Virginia (9.6%) and Texas (5.8%) [Ref. 46]. While these percentages may reflect the proportion of individuals assigned to installations in each state, they may also reflect increased propensity to divorce when assigned in these states.

Labor force participation rates of women have been increasing during the 1980s for economic reasons, and as a result of changing gender roles in society. For the non-military spouse, predominantly women, frequent moves wreak havoc on careers, and the new location may not always offer

adequate employment opportunities. "Thus", according to Segal, "employment problems create economic hardships for the family and problems of personal identity and worth for the wives." [Ref. 47] Several studies have shown results that imply conflicting effects on the propensity for divorce in military families. On one hand, the effect of economic prosperity is to slightly reduce divorce rates; individual-level studies showed "a clear inverse relation between income and other measures of socioeconomic status and divorce." [Ref. 48] On the other hand, greater economic independence for women increases their propensity to divorce [Ref. 49]. Again, respondents to Broeker's survey of divorced Navy members reported that the divorce was initiated by the spouse in 42.3 percent of the cases, by the member in 34.2 percent and, in 21.9 percent of cases, by mutual decision [Ref. 50]. These results may indicate that certain factors of military family life do increase at least a woman's propensity to divorce.

Other studies show that female labor force participation reduces marital instability and that divorce is less likely when the wife's earnings and the wife's share of total family income are higher. It was found that the only indicator of a wife's employment that increased the propensity to divorce was "hours employed." According to White, this finding may support the idea that autonomy of husbands' and wives' lives may be the critical factor [Ref. 51].

Factors of military life which affect the degree of autonomy existing between husbands and wives include family separations and the normative constraints imposed on family members by the military culture.

Risk of injury or death has an obviously negative effect on marriage survival rates. It is fairly common knowledge that divorce rates are relatively high for individuals in risky occupations such as law enforcement or fire protection. Because risk to life and limb varies by occupation, we would expect an overall higher rate of divorce among military service members. However, we would also expect the divorce rate to vary by actual military occupation, the projected amount of sea duty or field time, and the family's experience with deployments, exercises, or recent conflicts.

The very nature of military duty necessitates family separations of various length, frequency and cause. Separation occurs in Navy families during peacetime because of assignments to training, fleet or unit exercises, deployment and unaccompanied tours. The length of these separations can vary from a few days to eighteen months. Separations during wartime are generally of unknown length, bringing with them greater uncertainty and stress for the family.

Results of the 1985 DoD Survey of Officer and Enlisted personnel show that

...the largest group of both enlisted personnel and officers reported separations of up to four months, and

the smallest group reported separations of from nine to twelve months...Navy enlisted personnel experienced the longest separations; nearly 45 percent reported separations of more than four months....More Navy officers reported separations of more than four months than did officers in the other services. [Ref. 52].

Approximately 74 percent of Navy enlisted personnel and 78 percent of Navy officers had been separated from their families for some time during the year preceding the survey [Ref. 53].

Three civilian studies in the 1980s demonstrated that "shared time together is associated with lower divorce rates." [Ref. 54]

While the effects of separations on families vary depending on the type of separation...separations always require adjustments. Even families who cope well with separation view it as a stressful experience. Research has also shown that certain successful coping strategies have resulted in greater difficulties during service member reintegration with the family. [Ref. 55]

Similar to the event of relocation, the difficulties of separation may be more stressful at different stages of family life. Newly marrieds are more vulnerable. Important events such as pregnancy, childbirth and the early "firsts" in childhood are often missed by deployed sailors. Separation during adolescence may also interfere with parent-child relationships, inhibiting the adolescent's psychological development [Ref. 56].

The degree to which a military family accepts the normative constraints placed on it by the military may indicate the potential for increased or decreased marital stress and possible divorce.

Segal describes these normative constraints as those where family members informally carry the rank of the service member and wives are expected to initiate and take part in a panoply of social functions and volunteer activities. The pressure to conform to these constraints varies by the service member's rank. Officers' wives are expected to take a more active role in clubs and community activities as their husband advances. Enlisted wives and children are expected to "refrain from troublesome behavior." Normative constraints pose both a benefit and pressure. By joining the "system", wives gain a more defined social identity and experience a faster integration into supportive social networks; a decided benefit during stressful situations such as separations and relocations. On the other hand, bucking this informal system may result in pressure exerted on the military spouse to "control their family." [Ref. 57]

The normative constraints imposed by military culture may also serve to decrease the potential for divorce. In her research review, White found that "social integration...(such as that which exists within many close-knit military installations)...increases the likelihood that people will follow social norms in choosing an appropriate spouse and

fulfilling their marital roles, and decreased the likelihood that they will court community stigma by divorcing."

[Ref. 58]

Segal points out that "the effects on military families of the potential for injury and death in both peacetime and wartime are studied relatively little."

[Ref. 59]

3. Linkage of Divorce, Retention and Family Service Centers

There are various theoretical approaches available when evaluating the retention decision of a military member.

The retention decision--ultimately one of "stay" or "leave"--has previously been explored in a growing body of turnover research. Psychologists, sociologists and economists have each, according to their area of expertise, focused on the factors they consider pertinent. As with most research, the best explanations for human behavior seem to evolve when a combination of theories is used.

Overall job satisfaction has been found to be consistently and inversely related to turnover. A 1973 study by Porter and Steers broke down job satisfaction into four categories of internal factors that could be related to turnover behavior:

- organization-wide behavior;
- immediate work environment factors;

- job content factors; and
- personal factors. [Ref. 60]

Because divorce affects a military member in multiple ways, it is intertwined in all but one of these four categories. Only the category of job content factors is not directly affected by a change in the member's marital status. For individuals in the military, the event of divorce is definitely linked to overall job satisfaction and, therefore, retention. The question of how it is related remains to be addressed. How does divorce affect retention?

As summarized by Lowell, Stolzenberg and Winkler in their 1983 study of turnover theory as it relates to the military, "non-pecuniary factors such as family demands, location and job satisfaction had a significant impact on attrition behavior." [Ref. 61] There is little research that addresses the specific relationship of an individual's divorce to turnover behavior, or, even more specifically, divorce to the military reenlistment decision.

Perhaps the most eye-opening information on the effect of divorce in the Navy and the resulting implications for an individual's productivity and retainability was found in Divorces and Separations in the Navy: How to Cope, a 1983 Naval Postgraduate School Master's Thesis by Lieutenant Arla M. Broeker, USN. Broeker administered a random sample survey to Navy officer and enlisted personnel who were "single, with

dependents." The objective of the survey was to determine causes of divorce, the frequency of repeat marriages or repeat divorces, frequency and type of Navy-provided family services utilized and what personal changes had occurred because of the divorce. The survey was also used to solicit information as to whether the individual blamed the Navy for the divorce and how the divorce negatively or positively affected that individual's military career.

Broeker found that personal behavior and work performance actually improved significantly in 27.3 percent of those responding to the survey. Those individuals stated that they became "more promotable, better workers, and more career-oriented" due to the divorce. Other individuals, who displayed decreased job performance or negative personal behavior during or subsequent to the divorce--72.7 percent of those surveyed--received lower evaluations. These individuals, who might otherwise have been promotable, professed a belief that the divorce may have adversely affected their promotability. Some stated that they had to get out because they were no longer "front runners." Others remained in the Navy but questioned whether that one event kept them from being promoted.

Broeker concluded that "the quality of life for the divorced service person is not as good as it is for the never-married who is not having to pay alimony or child support." She also found that quality of work performance dropped at

least somewhat for 72.7 percent of those surveyed. The first finding would support a lower expected retention rate for divorcees, while the second could indicate lower performance evaluations and possibly the decreased likelihood of timely promotions, both of which might also increase the probability of attrition among divorcees. Decreased retention, even in a time of force reductions, becomes a concern because a smaller force may require higher quality people, and no information exists to quantify the "type" of people who separate from the Navy as a result of divorce.

There are several scenarios worth discussing that offer alternate hypotheses for predicting whether divorce has a positive or negative affect on retention.

Hunter describes one meaning of the reenlistment decision as, "when the military husband reenlists, he demonstrates in this way his commitment to the military and the military to him." [Ref. 62] Contrast this idea of mutual commitment to Segal's description of the "tug-of-war" relationship that exists between the greedy institutions of the military and the family. The picture of a military member positioned between a rock and a hard place becomes clear. If the member's family dislikes the military lifestyle, choosing to reenlist seems to imply that the commitment to the military is greater than the commitment to the family. Of course, if the military is the only means of supporting the family, this assumption may not be valid. The

scenario of apparent split loyalties could result in marital instability and, ultimately, divorce. Prior to reaching the reenlistment decision point, threat of divorce may have a greater influence on the member to leave the service, while the actual event of divorce may influence the member in either direction.

There are several factors that may influence the attrition rate among divorced service members. A divorced service member may be motivated not to reenlist because they blame the service for the dissolution of their marriage. Brooker's study revealed that "most survey respondents (over 50 percent) did not specifically blame the Navy for their divorce or separation. However, enlisted personnel tended to blame the Navy more than officers." [Ref. 63]

Economic factors, legislation and manpower policies combine to influence the divorced individual's reenlistment decision. If no children are involved, a divorced member's allowances revert back to the single rate, resulting in a decline in earnings. Those who still claim dependents because of child custody arrangements may experience an even greater loss of actual disposable income because of court-ordered child support payments. Depending upon the member's proximity to retirement, the years of marriage, and the property division, legislation exists that can cause a member to turn over up to half of their retirement to a former spouse. Military members are also much easier to find should court-

ordered payments fall into arrears. The member's perception of their new economic situation will affect their reenlistment decision.

Segal points out that the military is more greedy for some people. Single women with minor children fall into this category. They may be more motivated to remain in the military in order to provide a stable income. Housing and allowance benefits remain the same for this category of divorcee. Recent policy changes have also given single parents--men or women--priority in military day-care facilities.

Establishing the linkage of divorce, retention and Family Service Programs is accomplished by an indirect method. The objective of the military's family service initiatives is to increase the overall satisfaction of the member, and the member's family, with the military. The assumption is that enhanced quality of life will indirectly increase retention.

Married individuals having interpersonal difficulties or contemplating divorce may benefit from the programs offered by a Family Service Center. Previously discussed studies demonstrated that married individuals have higher reenlistment rates. If Family Service Programs are effective--that is, if they help unstable marriages to become more stable, or they can be linked to decreasing divorce rates since the establishment of Family Service Centers--retention rates should increase, all other things being equal.

Thus far, a review of the available literature reveals only one study that attempts to establish a quantitative link between Family Service Programs and retention rates. Cavin's 1987 study of Marine Corps family programs found that family programs appear to have a marginally positive effect on retention. He concluded that the retention rate might drop by 0.5 to 1.0 percentage point if family programs were eliminated. This study also found that Marine Corps members lack knowledge of, or experience with, programs available through Family Service Centers; civilian spouses were more aware of available services than the active duty spouse. Of those marines and spouses who had used the services, spouses tended to be less satisfied with them. Among the least-satisfying services, according to spouses, were spouse-and-child-abuse programs, premarital programs and single-parent programs. [Ref. 64]

A review of the Navy's family programs will provide an insight as to their objectives relative to the Navy's divorce "problem."

D. HISTORY OF THE FAMILY SERVICES PROGRAM

As Edna J. Hunter observed in Families Under the Flag:

Because military service personnel who experience family problems have lowered efficiency on the job and because career retention is a significant concern of the military organization, it is in the interest of the military system to view family functioning as a critical issue in day-to-day operations (Stanton, 1977). Moreover, support systems

that promote optimum functioning for the military family need to be explored. [Ref. 65]

"The Navy takes care of its own" has long been the rallying cry of support services activists, but formal recognition by the Navy of the family's role in maintaining an effective readiness posture is a relatively new concept. Prior to 1978, efforts to provide sailors and their dependents with adequate support services were sporadic and unfocused. In 1978 the Navy Family Awareness Conference, held in Norfolk, Virginia, discussed family support issues and adopted a long-range coordinated plan to provide a broad spectrum of support services [Ref. 66]. In 1979, the Family Support Program was established in OP-152; the code was changed to NMPC-66/OP-156 in 1982.

The Navy Family Support Program's mission statement, like most corporate charters, is relatively broad:

To improve the Navy's awareness of and access to reliable and useful information. (To provide) resources and services that support and enrich the lives of Navy families and single service members in order to contribute to combat readiness through improved on-the-job performance and increased retention of qualified Navy men and women.

In 1980, the Navy created the Family Service Center (FSC) concept, and established FSCs in major Navy population centers. Today, there are 74 FSC's in operation. Funding and administrative control are exercised by the cognizant base commander, while NMPC-66 provides general guidance and policy.

E. RELATED ISSUES

Secondary to the direct relationship among divorce, retention and Family Support Programs are the implications of the single parent population and the Uniformed Services Former Spouses Protection (USFSP) Act for Navy personnel. A discussion on the impact of each is important, in that they are a direct result of increasing divorce rates in the military and have a growing influence on military manpower policy.

One of the direct results of increased divorce is the introduction of a growing population of military single parents; that is, those unmarried service members who retain physical custody of their children. Single parents in the military are a growing concern, not only because of the increased responsibilities they face for family finances, child care arrangement and household management, but also because of the unique challenges imposed on them in trying to balance those responsibilities with the additional ones imposed by the Navy (for example, 24-hour watchstanding, reassignment to unaccompanied tours, sea duty, and mobilization).

Decreased retention, even in a time of force reductions, becomes a concern because a smaller force may require higher quality people, and no information exists to quantify the "type" of people who separate from the Navy as a result of divorce.

Navy interest in the USFSP is most appropriate. The percentage of married Navy careerists, personnel with more than eight years of service, has risen over the past decade. As of 1982, marriage statistics for career enlisted and officers were generally the same: 70 percent of men with five to ten years of service were married, and the percentage increased steadily to over 90 percent for those men with over 22 years of service. The percentage of married women peaked at the 50 percent level with 11 to 16 years of service, and steadily declined to just over 10 percent for those with over 22 years of service [Ref. 67].

Divorce rates have also increased rapidly since the introduction of no-fault divorce laws in many states, with the result that over half of all marriages end in divorce [Ref. 68]. That translates into a significant number of potential divorces, with a share of the member's retirement money as one of the hostages in any resulting legal battle.

The Navy is concerned with this legislation, too, from a retention perspective. If a guaranteed pension is a primary reason for the long-term commitment of the Navy career force, any threat to the pension is a threat to that commitment. The Air Force calculated that, of a total of 78,200 divorced enlisted and 89,300 divorced officer personnel, a total of 2,000 additional separations from the service would occur as an immediate impact of the USFSP Act. Approximately 500 separations per year were projected to occur due to the

perceived loss of future income. [Ref. 69] Whether it is equitable for the spouse to be compensated for years of service in a Navy marriage is not the issue; the sailor is the issue, and sailors perceived passage of the USFSP Act as an erosion of benefits.

1. Single Parents

Personal demographics in society have seen a shift over the last decade toward an increase in the number of single parents. This shift is also being reflected among active-duty Navy personnel by increases in the numbers of single, unwed mothers and divorced, separated or widowed men and women who retain custody of their children. Whether military or civilian, single parents face similar problems: sole responsibility for finances, child care arrangements and household management to name but an obvious few. [Ref. 70] However, the single parent in the Navy faces the unique challenge of meeting the additional responsibilities of possible 24-hour watch-standing duties, reassignment to unaccompanied tours, sea duty, and mobilization.

In the late 1970s, Navy policy required the administrative discharge, "for the convenience of the government," of single women who became pregnant. The policy later changed to require single mothers to remain on active duty until their initial active duty obligation was met. In

the early 1980s, the mandatory discharge policy was ruled unconstitutional. [Ref. 71] Currently there is no requirement to discharge any category of single parent. In fact, support for single parents has increased. Family Service Centers have increased programs aimed specifically at assisting single parents, and single parents receive first priority when placing their children in military child care facilities.

Given the current circumstances of shrinking budgets, decreasing manpower projections, and a decreasing youth labor pool, the policies directed toward the Navy's single parent population are of increasing importance for several reasons. It is generally believed that single parents represent a growing resource of trained and experienced personnel whose retention would seem desirable, provided the cost of meeting their special needs do not outweigh the benefits derived from their retention. The gains may seem obvious, but what are the costs of retaining increasing numbers of single parents?

The point of analyzing the policy issue of retaining single parents is to ensure unit readiness, to detect practices that give the appearance of discriminatory or unfair action either for or against single parents, and to promote retention of quality (well-trained, experienced) personnel.

Analysis of current policy on single parents in the Navy should center around determining single parents' ability to mobilize, stand watch and perform normal duties as

prescribed by the assigned unit. It should also include determination of the morale of the unit as defined by the extent to which its personnel are affected by the presence of single parents. For example, how morale is affected by apparent discriminatory practices in assigning normal or watch-standing duties, and allowing greater lenience in time off to attend to family matters. The analysis should also focus on decreasing the problems encountered by single parents and other personnel working with single parents in an effort to improve their productivity and retainability. Such an approach is based on the assumption that the only legal alternative available to the Navy is the retention or discharge of the entire single-parent population.

The most important data needed for single-parent policy analysis are the current number of personnel who fall into the single-parent category. Table I, drawn from a 1980 Naval Postgraduate School thesis by M. W. Rider, gives an estimate of the size of the single-parent population.

In her thesis, Rider also predicted that the number of single parents would rise to 24,175 men and 2,478 women for a total of 26,653 single parents in the Navy by 1985. Currently, the exact number of single parents in the Navy is unknown because of data collection procedures service-wide. However, as of June 1990, the Center for Naval Analyses (CNA) estimated that one of every 27 men and one of every 10 women were single parents. This is a total of approximately 3,800

Table I ESTIMATED SINGLE PARENT TOTAL (NAVY), 1980

<u>SEX</u>	<u>OFFICER</u>	<u>ENLISTED</u>	<u>TOTAL</u>
MALE	1,076	11,855	12,931
FEMALE	<u>87</u>	<u>1,234</u>	<u>1,321</u>
TOTAL	1,163	13,089	14,252

Source: M.W. Rider, "Single Parents in the Military",
M.S. Thesis, Naval Postgraduate School, Monterey,
California, June 1980, p.72.

Note: Figures include all single parents (widowed,
divorced or never married) without clarification of
whether the service member actually has child custody.

women and 35,000 men on active duty in the Navy who are single
parents.

Further analysis could be accomplished by a random
survey of units throughout the Navy. All echelons of the unit
surveyed would be required to respond to elicit the
perceptions of all unit members to determine the actual and
perceived effects of single parents on unit morale.

Data on the composition and current utilization of the
single parent populations is essential to any cost/benefit
analysis, and to determine feasible alternatives to current
policy. The option of eliminating the entire population of
single parents might not only send the message of total non-
support for Navy people in personal upheaval, but also may be
completely cost-prohibitive when personnel replacement costs
are considered.

The costs and nature of Family Service Programs
designed for the single parent are also required. The

combination of these data sets may result in the conclusion that the benefits of expanding single-parent programs and military child care may exceed the costs of replacing single parents lost due to a lack of military system support. Most, if not all, of these data should be available from Family Support Centers and the Navy Finance Center (NFC), Cleveland.¹

It is also important to determine the effectiveness of the current policy which allows the initial enlistment or commissioning of single personnel with minor dependents, provided they are in the custody of another during the initial training period [Ref. 72].

There are essentially three alternatives in this issue: keep, minimize, or eliminate the entire single-parent population.

Eliminating this population has several major drawbacks. What happens to a career service member (for example, one with more than eight years of active service) who gets divorced and retains custody of minor children? What kind of message would the Navy be sending to this individual? It could be construed that the Navy was trying to maintain a married force at the expense of the member's personal desires. This would most likely have a detrimental effect on retention of single or married-but-childless members who could foresee

¹Rider determined that NFC Cleveland had the most accurate method for determining the number of people in the "single parent with dependents in residence" category.

future scenarios of being abandoned by the Navy after years of dedication, perhaps due to events beyond their control. The likelihood of a legal challenge to such a policy is considered to be a strong possibility, as well.

Keeping the population of single parents presents problems associated with mobilization, watch-standing, availability for overseas or unaccompanied assignments, as well as sea duty. Many single parents have already demonstrated an ability to fulfill all of their assigned duties as well as any of their shipmates. There have also been some who have taken advantage of other avenues such as hardship reassignment (to reorganize their lives after, or during, personal crisis), or hardship discharge (when the added responsibilities of single parenting in the Navy became too difficult). With the support programs and alternatives currently available, single parents appear to be handling their responsibilities to their families and the Navy at least adequately.

Minimizing the single parent population might be accomplished in a variety of ways; for example, decreasing the economic motivation for junior sailors to marry and start families by closing the 14 percent pay gap between single sailors and those with dependents below the E-4 paygrade. The population could also be minimized by changing the policies of recruiting and retaining single parents.

Eliminating the initial influx of single parents seems to be the most logical alternative to minimizing this particular population. The retention rate of first term recruits is traditionally lower than that of careerists because of problems involved in adapting to military life. If this adaptation is difficult for single persons without dependents, imagine the additional hardships encountered by the first term single parent. CNA estimates that about 1,500 new male single parents and 580 new female single parents per year are encountered in the fleet. Recruiting efforts bring in an additional 380 female and 1,100 male single parents annually. CNA also looked at the inventory change between fiscal 1987 and 1989 and discovered that there were an additional 540 female and 100 male single parents. From these changes one could surmise that single parents were either attriting at a higher rate, remarrying, or a combination of both. It also appears that male single parents are doing one of these actions at a faster rate than the women.

The impact of restricting the reenlistment of single parents was also examined by CNA. At the end of fiscal 1989 there were 5,300 men and 2,300 women single parents; all women and half of the men had custody of their dependent children. Based on the assumption that one quarter of these individuals would be eligible for reenlistment that year, CNA concluded that if single parents were ineligible to reenlist, the Navy would lose somewhere between 600 and 1,000 reenlistments

annually. They also concluded that this policy may lead to adaptive behavior, such as "marriages of convenience", to maintain reenlistment eligibility. [Ref. 73]

The nature of current policy indicates that the Navy's single parents are a productive resource whose special needs deserve attention. The following recommendations are provided to increase the mobilization potential and general utilization of single parents.

- The requirement for single parents, regardless of assignment to an operational or administrative command, to have a documented mobilization custody plan needs to be enforced. The actual planning required to provide this documentation is lengthy and thought-provoking. It will serve to reinforce the message that single parents face increased responsibility in order to meet both the needs of the Navy and their family, and it encourages the service member to give careful thought to their ability to fully meet their responsibilities. The Army and Air Force already have standardized mobilization plans, while the Navy operates on a unit-by-unit discretionary basis. Failure by unit commanders to enforce this requirement hinders the readiness of the unit as does last minute planning on the part of the service member. The mobilization custody plan requirement should eventually be expanded to include all service members and should be maintained and updated concurrently with the member's Record of Emergency Data.
- Increase the budget for Family Service Centers (FSCs) and child care facilities. FSCs could offer additional services and educational opportunities for single parents, and for those personnel determined to be at high risk of becoming single parents. Expansion of the Family Home Care program to 24-hour availability might be considered for those single parents in jobs requiring them to stand 24-hour duty periods.
- Coordinate single parent roommates (on a request basis) for assignment to government or civilian quarters. This innovation would be especially beneficial to single parents assigned to the same unit, or type of unit, where

they are required to stand shift work. This housing situation would facilitate meeting home and child care responsibilities. Family Service Center personnel could be useful in coordinating and determining compatibility for "housemate" assignments.

As a general recommendation, it is also suggested that a study be undertaken to explore the feasibility of curbing the enlistment or commissioning of single parents.

Considering the crisis in the Persian Gulf and the ultimate downsizing of the military, these recommendations support two primary Navy objectives: maximum utilization of trained personnel and limited resources (i.e. government housing), and increasing the quality of life for Navy personnel. They also attempt to minimize the potentially costly effects of maintaining single parents within the Navy population. Therefore, gaining support for their enactment should be relatively simple.

Obtaining additional funds for non-operational programs may be difficult in an era of budget cuts. Unfortunately, the data to perform a cost/benefit analysis of different scenarios--analysis which would enhance funding support--are not readily available. Support for recommendations not requiring funding could be garnered by starting with the organizations primarily affected: FSCs, MWRs, and Navy Recruiting Command. Effecting pilot programs for each recommendation for a 6-to-12-month trial period offers the most realistic opportunities for evaluating

results. After that time, the recommendations could be reevaluated as to their actual effectiveness. These steps would make ultimate adoption of the recommendations much more likely.

2. The Uniformed Services Former Spouses Protection Act

In September 1982, Congress enacted the Uniformed Services Former Spouses Protection (USFSP) Act in response to the Supreme Court's McCarty v. McCarty decision.

This decision held that, in the absence of specific federal authority, state courts could not treat military retired pay as marital community property. The act authorized:

- the services to pay a portion of a military member's retired pay directly to his/her former spouse in compliance with a court order,
- the retired member to designate a former spouse as a beneficiary of his/her Survivor Benefit Plan, and
- certain former spouses to receive medical, commissary, and military exchange benefits. [Ref. 74]

The USFSP Act proposed that military retirement could now be considered by the state courts as community property in divorce settlements. Prior to 1982, military retirement pay was protected from such division by federal law. Retirement pay was initially intended to be considered as a "retainer", since the retired service member is still subject to recall to active duty [Ref. 75].

Additionally, there were nine community property states (Arizona, California, Idaho, Illinois, Michigan,

Montana, New Mexico, Texas and Washington) which already demonstrated in non-military cases that they considered yet-to-be-received retirement funds as divisible income in divorce settlements. Enactment of the USFSP enabled all states to consider military retirement as divisible income. "One fear of the Navy was that, by enacting such a law, Congress may be giving states the impression that such a property division is being encouraged in the name of national marital equity."
[Ref. 76]

The September 10, 1990 issue of Navy Times reported that the House Armed Services Committee has proposed changes to the Former Spouses Protection Act. These changes are included in the House version of the fiscal 1991 Defense Authorization Bill approved by the committee on 31 July 1990.

The bill, as amended, would forbid the reopening of divorce cases finalized prior to June 25, 1981 (the date of the McCarty decision) and would declare null and void any divorce settlements of cases reopened since that date. Reopening of closed cases, particularly in California, has resulted in mandatory additional lump-sum payments of thousands of dollars to ex-spouses, resulting in bankruptcy for some military retirees.

Additionally, in recognition of tax loopholes utilized by military retirees that resulted in increased initial taxation and a smaller "pie" to be divided with the ex-spouse, the bill recommends that the amount of income tax withheld

from retirement pay and other outstanding debts no longer be considered when calculating the amount of retired pay available for division.

The act presents four major manpower and personnel policy implications:

- Increased training and replacement costs as the Navy attempts to replace sailors departing the service. To paraphrase the Bard, "Hell hath no fury like a sailor scorned..."; no amount of pre-separation counseling will convince the exiting petty officer or chief petty officer that the Navy did not have any control over congressional action that threatens to ruin his retirement plans.
- Increased recruiting budgets, the logical follow-on to increased training and replacement costs. The Navy operates in an internal labor market; tomorrow's leading petty officers are today's recruits. There is no quick fix: to fill vacancies at the top in eight-to-ten years, the system must be fed at the bottom.
- A decrease in readiness should be anticipated. As E-6s and E-7s elect to leave the Navy rather than risk sharing their retirement incomes with ex-spouses, a vacuum will be created, resulting in longer sea tours for remaining supervisors. This, in turn, will lead to an additional decrease in retention, and a decrease in readiness. It can be argued that the Selective Reenlistment Bonus (SRB) "carrot" can be waived early enough in this cycle to prevent a free-fall, but it will be a very expensive carrot indeed.
- A decided shift in demographics can be anticipated, as married people shy away from the Navy. Some will argue that single sailors are good for the Navy; less cost, more mobility and fewer discipline problems. At subordinate levels (E-1 to E-4 and O-1 to O-3), that is not an argument completely without merit. However, if the Navy is to maintain sufficient numbers of senior people, dependents are part of the cost for them. It would be unwise to support the "single is better" argument too far.

There are at least two categories of alternatives to the USFSP Act: alternatives internal to the Navy and those that are external, which alter the act as written.

Looking first at the internal alternatives, the Navy must strengthen Navy marriages by shoring up support services available. Accelerating the development and funding of Family Service Centers is a key element of this alternative. The Navy's best opportunity to blunt the impact of this legislation is to make it not applicable to the majority of Navy people. Additionally, the Navy could develop standard documentation that would help define the spousal contribution to the marriage. According to Representative Pat Schroeder,

...the presumption is marital equality and contribution to country. If the military spouse can come forward and rebut that presumption with anything that the court considers justifiable evidence, for example, that she is independently wealthy, or they may have been married ten years but he never saw her, he could not recognize her even in court, whatever... [Ref. 77]

Documentation could range from informal--letters of appreciation to the spouse for participation in command events as well as administrative or disciplinary actions awarded the member that could be specifically attributed to actions, or lack of action, on the part of the spouse--to more formal documents such as prenuptial agreements.

External alternatives, or proposed changes to the legislation, would encompass the areas of remarriage of former spouses and a "sliding scale" method of determining ex-spousal entitlement.

Former spouses who remarry, especially those who remarry another military member, should be ineligible to receive a portion of the ex-spouse's retirement. The former spouse who remarries, and who continues to receive a portion of one retirement and potentially stands to receive the benefits of another pension, should be considered a "double-dipper." Federal law has already addressed this issue for military retirees who complete a civil service career and are no longer eligible to collect full retirement benefits from both careers. Alimony awarded in a divorce order is discontinued upon the remarriage of the spouse receiving the alimony; former spouses who remarry should also be denied the previously awarded portion of military retirement pay.

A more realistic "sliding scale" to determine the amount of spousal entitlement is recommended, rather than the flat or pro-rated formula currently in the act. Elements to be used to determine payment amounts could include things like a "need element", number of years of sea duty served by the member, ratio of years of marriage to years of separation, and other types of narrowing criteria.

The aggregate benefits derived from implementing the recommended alternatives are increased retention due to increased family and individual support provided through command attention to marriage, and additional programs in FSCs. Decreased divorce rates can be anticipated which, in turn, would increase morale and unit readiness.

III. METHODOLOGY AND ANALYSIS

A. COMPARATIVE POPULATION STATISTICS

1. Data Sources

The data used for the statistical comparison of civilian, composite Department of Defense and Navy populations have been gathered primarily from the U.S. Bureau of the Census and the Defense Manpower Data Center. Specifically, "civilian" data are from the Census Bureau's Statistical Abstract of the United States (1990), and Vital Statistics of the United States, Volume III, "Marriage and Divorce, 1982, 1983, 1984." The Defense Manpower Data Center (DMDC) provided the military marriage and divorce rates for the composite services and the Navy using the master enlisted and officer files for the years 1977 through 1988. Some of the military statistics for 1985 are drawn from the 1985 DoD Survey of Officer and Enlisted Personnel.

There were several problems encountered with both the civilian and military data. Sources of civilian marriage and divorce statistics were inconsistent from year to year in their presentation of information relevant to this thesis. For example, age groupings varied, and certain tables of divorce statistics were not available for all of the years 1977 through 1988. Military age groupings did not exactly

match those of civilians; therefore, some estimation was involved in deriving figures for comparative analysis. While exact figures for military populations and numbers of marriages and divorces were available, civilian rates were estimated (by the Census Bureau) based on annual surveys. Because of these discrepancies, only a general trend analysis between civilian and military rates is valid. The comparisons within military population groups, however, should be statistically accurate.

2. Statistical Method

The primary purpose of comparing the civilian, composite military (DoD) and Navy marriage and divorce rates is to determine whether there is a statistically significant difference between these groups. If there is a difference, we want to determine which population groups demonstrate the highest rates of divorce. In distinguishing high divorce rate groups by age, gender, and race we believe we can better identify individuals who may be at greater risk of divorce, and thus enable Family Service Centers (FSCs) to better target their resources.

The existence of a difference in divorce rates is determined by looking first at the aggregate marriage and divorce rates of each population. The rates for each year for the period 1977 to 1988 are examined for gross population differences (See Appendix C). The marriage and divorce rates

for civilians are estimates based on a sample population survey published annually in the Statistical Abstract of the United States. The military marriage and divorce statistics generated by DMDC are calculated using the formulas:

$$\text{Marriage Rate} = \frac{\# \text{ of individuals who married during year}}{\# \text{ of individuals in the population}}$$

$$\text{Divorce Rate} = \frac{\# \text{ of individuals who divorced during year}}{\# \text{ of married individuals in the population}}$$

In order to determine whether the rates for civilians are different from those of the military, a hypothesis test for two population proportions is required. The null hypothesis for this test is $H_0: P_1 = P_2$; the population proportions (rates) are the same. The two assumptions needed for the test are:

- independent samples, and
- large samples.

The tests will be performed at the .05 significance level, and a two-tailed test will be used. The test statistic is computed by the formula:

$$Z = (p_1 - p_2) / (\sqrt{p(1-p)} \sqrt{(1/n_1) + (1/n_2)})$$

$$\text{where } p = (x_1 + x_2) / (n_1 + n_2)$$

If the value of the test statistic falls in the reject region, we will reject H_0 and conclude that the rates are different.

An alternative method of determining whether population rates are statistically different is to construct confidence intervals for each rate. If these intervals overlap, the rates are not statistically different.

The formula used in this case is:

$$P_i \pm Z_{1-\alpha/2} \sqrt{P_i(1-P_i)/n}$$

where P_i = the rate for population group i ,
 n = the size of the population, and
 Z = 1.96 (.95 confidence interval or a .05 significance level).

While the assumption of a normal distribution of the populations is not required for this population proportion test, the question of population distributions being too different raises concerns over the comparability of rates for two very different populations. A basic problem associated with comparing the aggregate figures of the civilian and military populations is that the military population is a subset of the U.S. population. A better comparison could be made by accounting for existing differences in population composition such as age, gender, and occupational distribution. The military is youth-biased; it is composed of only 10 to 14 percent women, compared to 50 percent in the general population (and in the labor force); and it has a corporate structure. Therefore, the statistical comparisons begin with the aggregate marriage and divorce rates, and are gradually disaggregated to compare rate differences by age,

gender, and racial groups, using only figures for the military's enlisted population.

B. TREND ANALYSIS

This analysis begins with a description of the general trends in marriage and divorce rates for the civilian, composite military (DoD), and Navy populations from 1977 to 1988. The analysis then shifts to determining if these rates are statistically different. We then focus on the subgroups of the Navy population to describe their divorce patterns and to determine if there are distinct groups that seem more at risk to divorce.

Figures 4 and 5, graphic presentations of tabular information provided in Appendix C, display annual marriage and divorce rates, respectively, for the three aggregate populations across time, from fiscal year 1977 through fiscal year 1988. At first glance, the gross differences in marriage and divorce rates between civilians and enlisted service members seem dramatic. Over the 12-year period 1977 to 1988, it appears that the annual marriage rates of military members were six to seven times those of the civilian population, while annual divorce rates were four to six times as high. However, comparing marriage and divorce rates at the aggregate level of these populations is deceiving, because the composition of each population by age, gender, and marital status is different. To correct for these differences in the

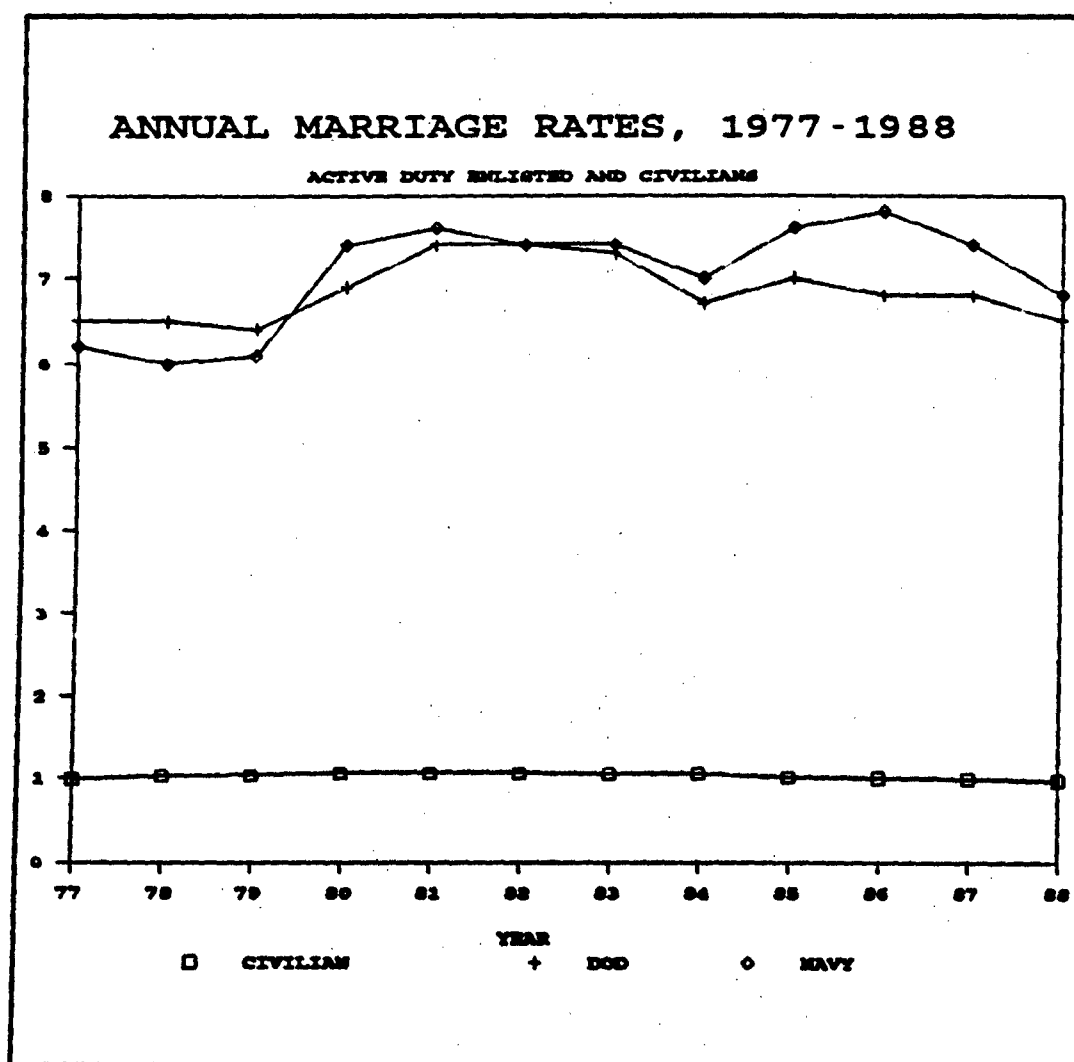


Figure 4 Fiscal Year 1977-1988 Annual Marriage Rates (Active Duty and Civilians)

Source: U.S. Census Bureau and Defense Manpower Data Center

composition of each population, the analysis was telescoped from 12-year, aggregate data to a single year, categorical focus. Fiscal 1984 was selected at random, but the technique can be applied to any year.

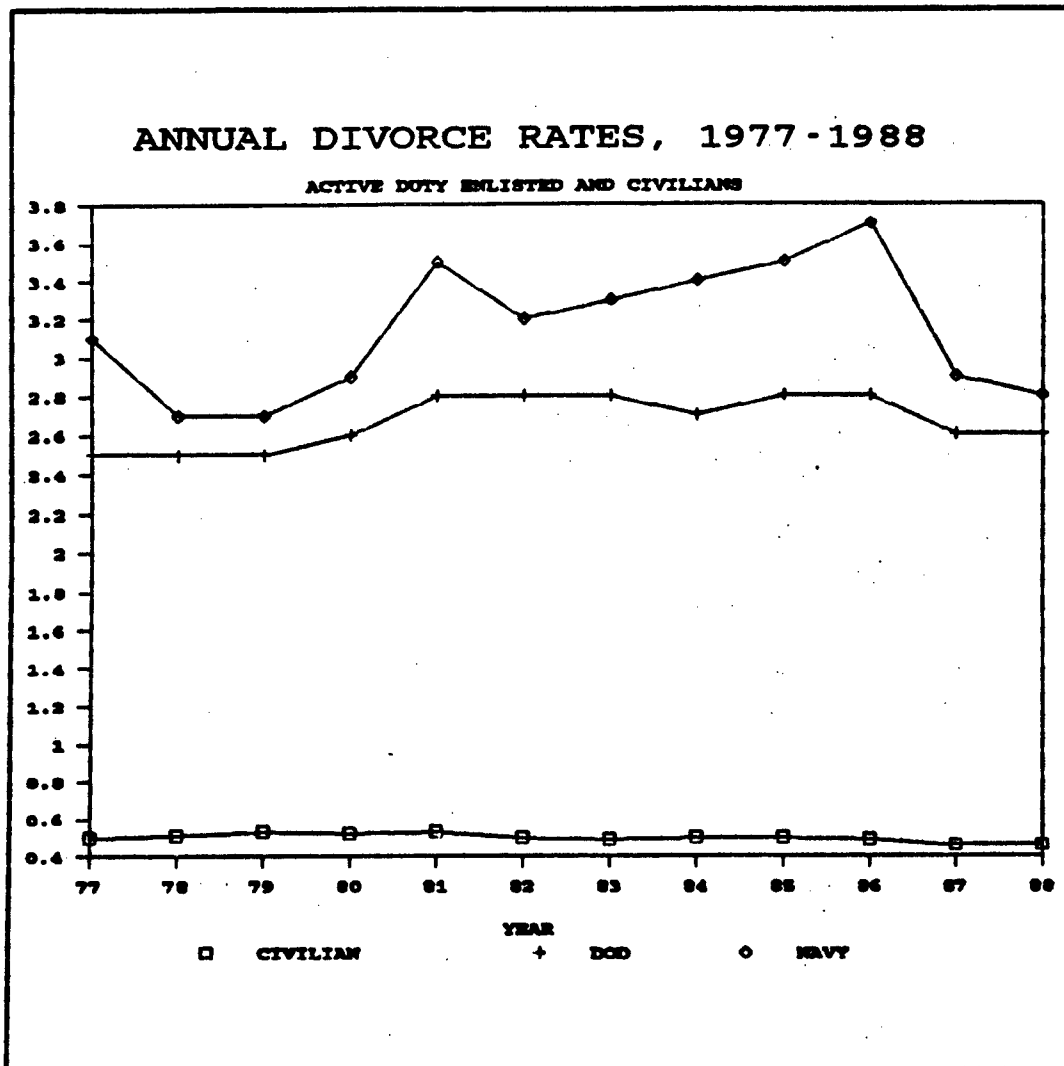


Figure 5 Fiscal Year 1977-1988 Annual Divorce Rates (Active Duty Enlisted and Civilians)

**Source: U.S. Census Bureau and Defense Manpower Data Center
1. Comparison of Marital Status'**

Figures 6 and 7 illustrate that, at one point in time, the percent of military members who are married increased with age, as it did with the civilian population. Compared with the civilian population, the percentage of male military

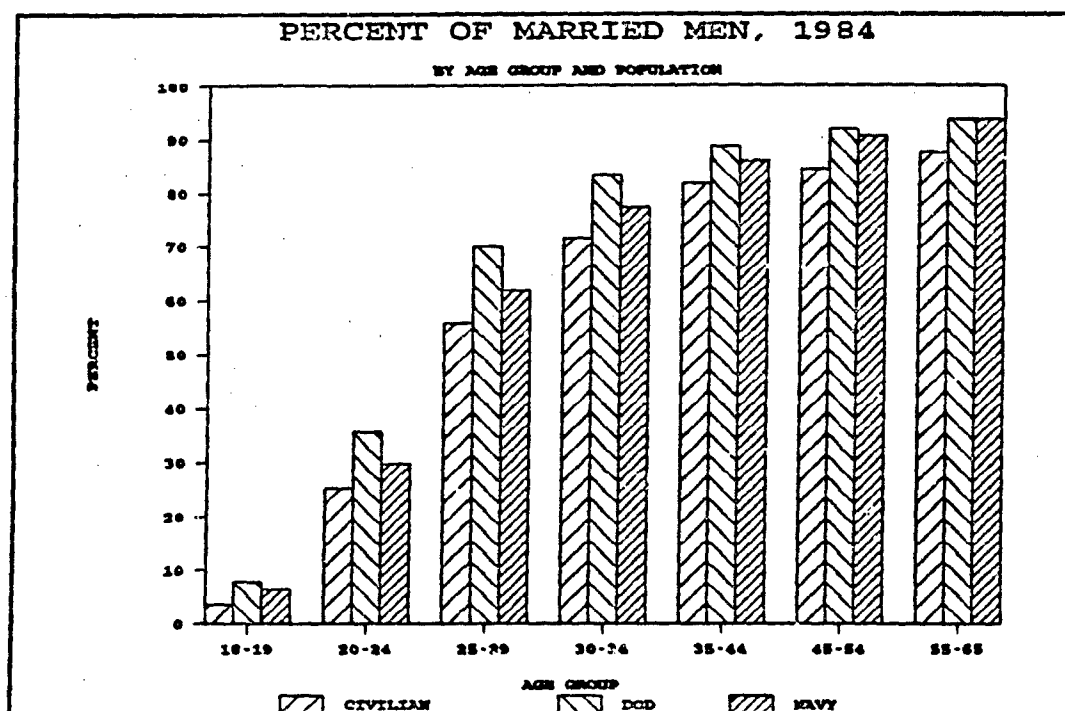


Figure 6 Fiscal Year 1984 Percentage of Men Who Are Married (Active Duty and Civilian)

Source: U.S. Census Bureau and Defense Manpower Data Center

members who are married is consistently greater across the various age categories. On the other hand, the percentage of female military members who are married is consistently much lower than their civilian counterparts, especially for Navy women in the younger age groups.

Figure 8, a presentation of the fiscal year 1984 population distribution, illustrates another key problem with aggregate comparison of marriage and divorce rates over time. The enlisted force is younger than the civilian labor force. Almost half of the civilian labor force was 35 years of age and over, compared with only 16 percent of the enlisted force.

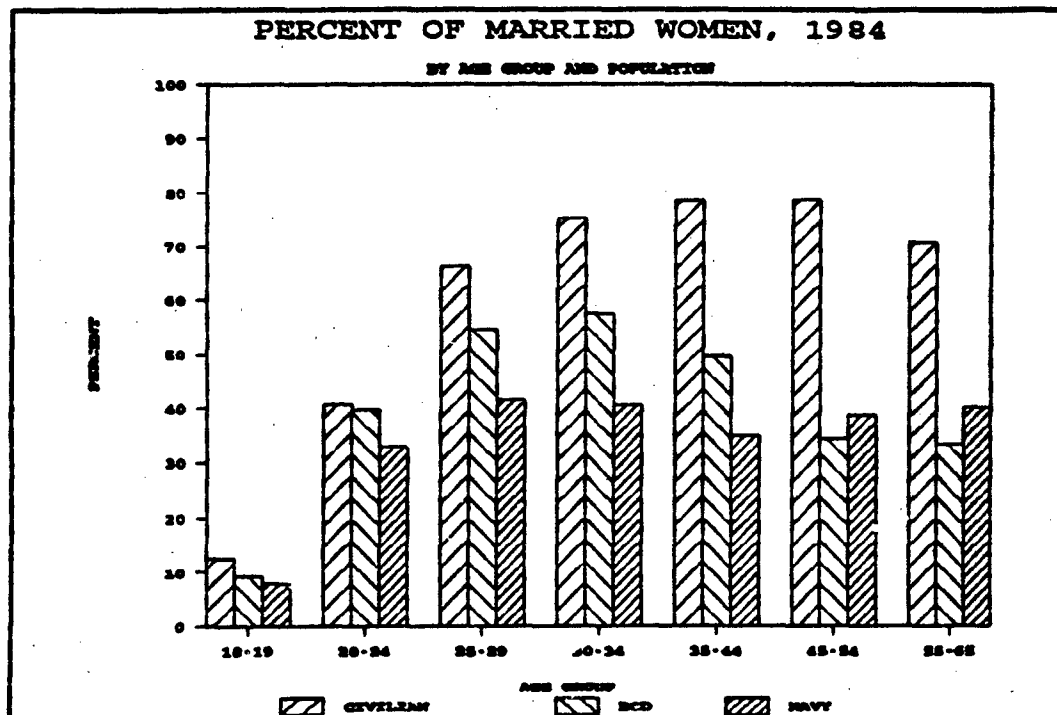


Figure 7 Fiscal Year 1984 Percentage of Women Who Are Married (Active Duty and Civilians)

Source: U.S. Census Bureau and Defense Manpower Data Center

Conversely, 84 percent of the enlisted force is under 35; 50 percent of the civilian labor force is under 35.

2. Original and Adjusted Marriage Rates

Figures 9 and 10 provide original and "adjusted" marriage rate comparisons. The initial marriage rate calculations were made by defining the marriage rate as the proportion of the entire population (in that age group) that married during the year. Although this is the standard calculation used by the U.S. Census Bureau, we questioned if it would not be more accurate to define the marriage rate as

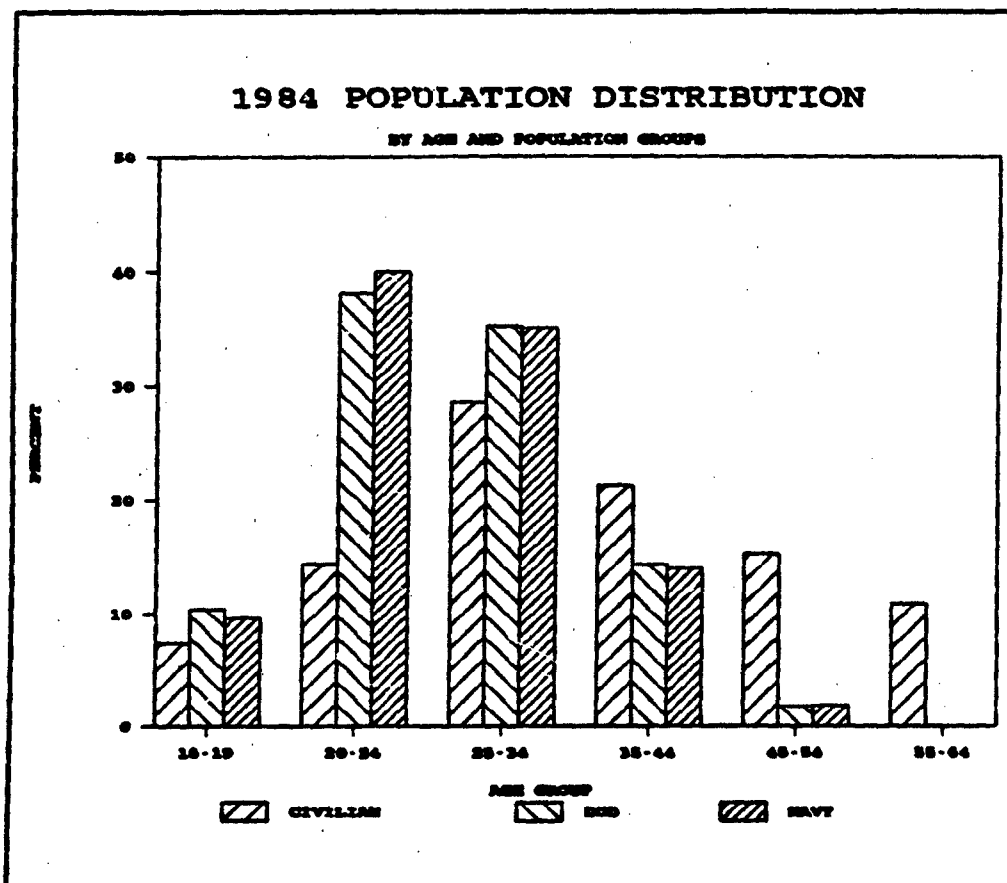


Figure 8 Fiscal Year 1984 Population Distribution (Active Duty and Civilian)

Source: U.S. Census Bureau and Defense Manpower Data Center

the proportion of the single population (again, in that age group) which married during the year. We believed that the marriage rates would be different than originally calculated, perhaps significantly so, because the proportion of the single people in each age group and their distribution across the military and civilian populations were significantly different. Civilian figures for the single population in each

age group were available for the re-calculations; Navy figures were approximated by applying the percent of the population that was single or married in 1985 to the 1984 population, by age group.

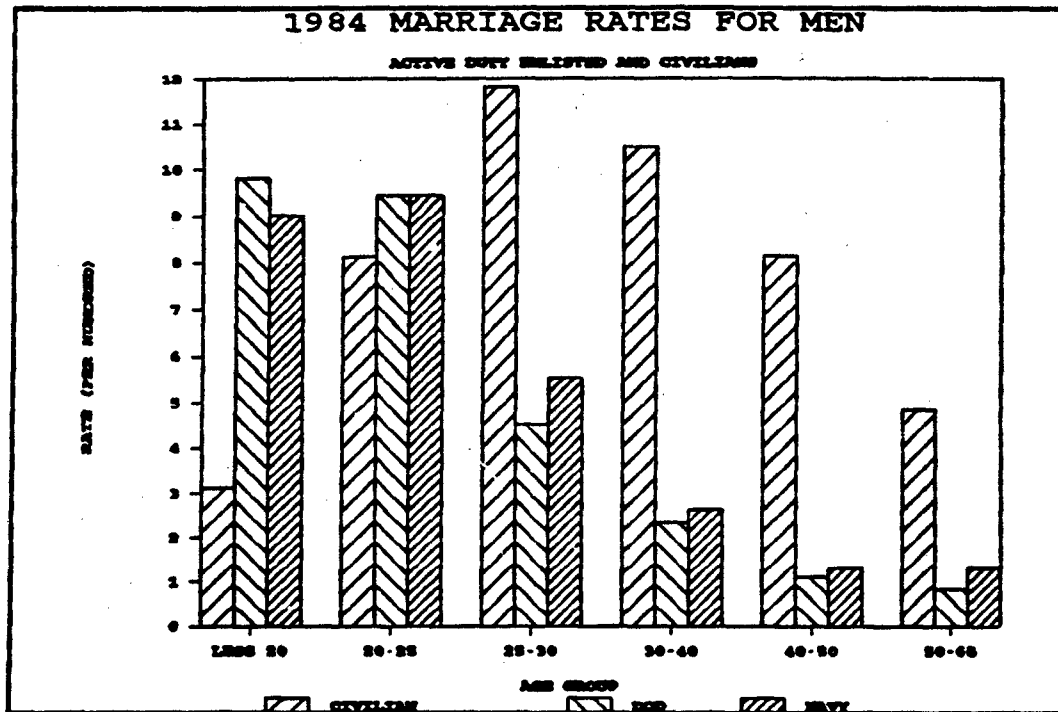


Figure 9 Fiscal Year 1984 Marriage Rates for Men (Active Duty and Civilians)

Source: U.S. Census Bureau and Defense Manpower Data Center

The male marriage rates for military and civilians remained statistically different from each other and also statistically different from the rates originally calculated. The new patterns, however, tell fairly different stories.

In the original rates for civilian men, the marriage rates look like a normal distribution curve over the age groups, peaking in the 25-30 year group at just under 12

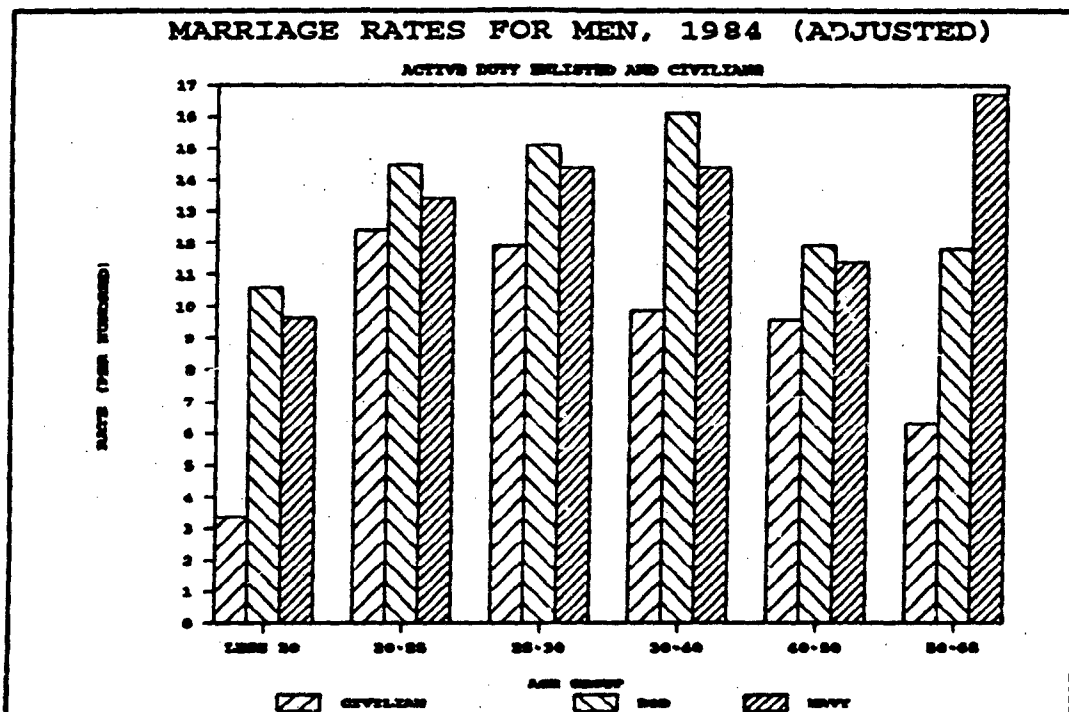


Figure 10 Fiscal Year 1984 Marriage Rates for Men (Adjusted) (Active Duty and Civilian)

Source: U.S. Census Bureau and Defense Manpower Data Center

percent, and ranging from three percent to five percent. The adjusted rates for the same group ranged from three percent to six percent. They peaked again at approximately 12 percent, but for the 20-25 year group. Then they dropped more slowly for the older age groups to six percent.

The most distinctive changes occurred for the military rates. In the original calculations, the marriage rate started at nine percent (about three times that for civilians), climbed slightly for the 20-25 year group, and then quickly dropped off over the remaining categories to just over one percent. The adjusted rates revealed a substantially

different pattern. Again, the rates started off at nine percent for the under 20 group, increased over the next two age groups, peaking at 15 percent for 25-30 year-olds, dropped to 12 percent (rather than the 1 percent reflected in the unadjusted figures) for the 40-50 group, and then climbed again to over 16 percent for the 50-65 age category.

Figures 11 and 12 illustrate fiscal 1984 female marriage rates.

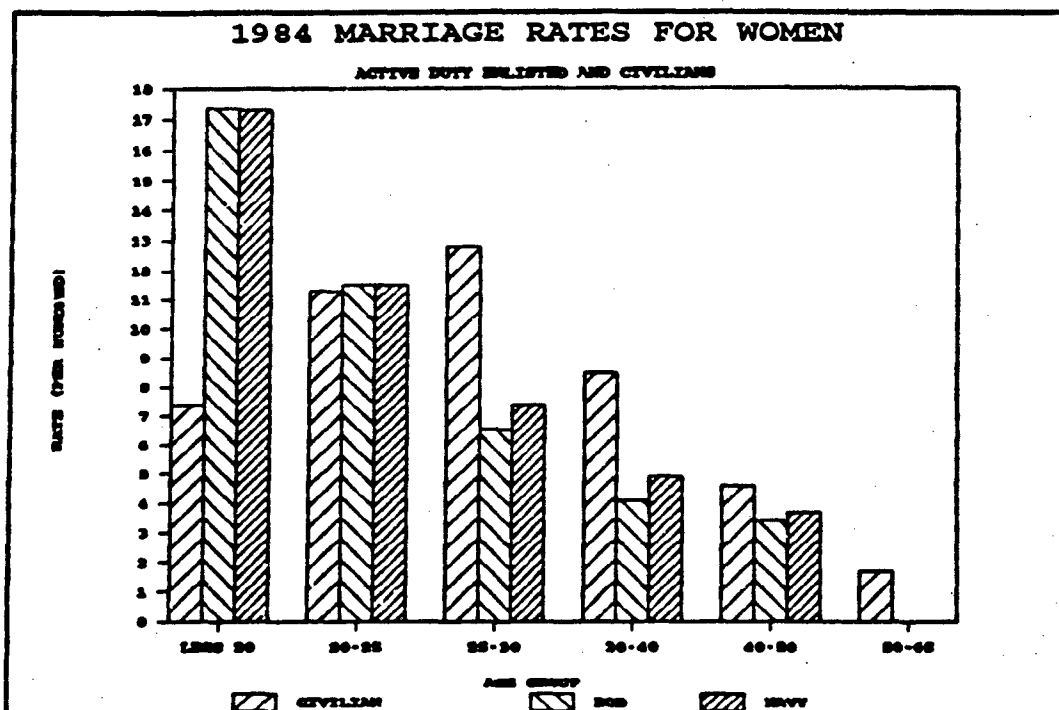


Figure 11 Fiscal Year 1984 Marriage Rates for Women (Active Duty and Civilian)

Source: U.S. Census Bureau and Defense Manpower Data Center

Original and adjusted marriage rates for civilian women follow approximately the same patterns and peak at just

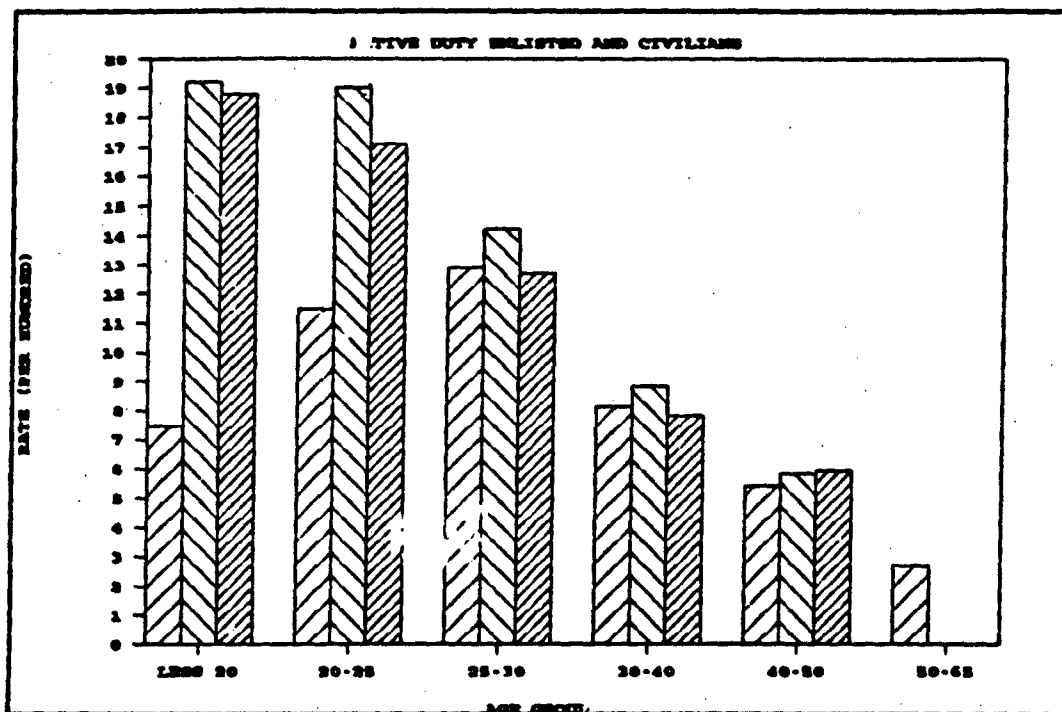


Figure 12 Fiscal Year 1984 Marriage Rates for Women (Adjusted)
(Active Duty and Civilian)

Source: U.S. Census Bureau and Defense Manpower Data Center

under 12 percent for the 25-30 year-old category, ranging from seven to three percent over the age groups.

The original pattern for military women peaks at 17 percent in the under 20 age group, drops off to 11 percent at the 20-25 year point and gradually decreases to about four percent, but remains statistically lower than the civilian rates. Adjusted rates for military women followed the same initial pattern, peaking at 19 percent in the under 20 age group, but remaining at the 17 percent rate for the 20-25 year group. This time the further downward movement of rates for

military women was not statistically different from those of civilian women.

Additional tables of marriage rates by age, gender, and population groups are provided in Appendix E. While they contain useful information, the focus of this analysis now shifts to the central topic of the thesis, divorce rates.

3. Comparison of Civilian and Military Divorce Rates

Figures 13 and 14 offer fiscal year 1984 divorce rate information for men and women, respectively.

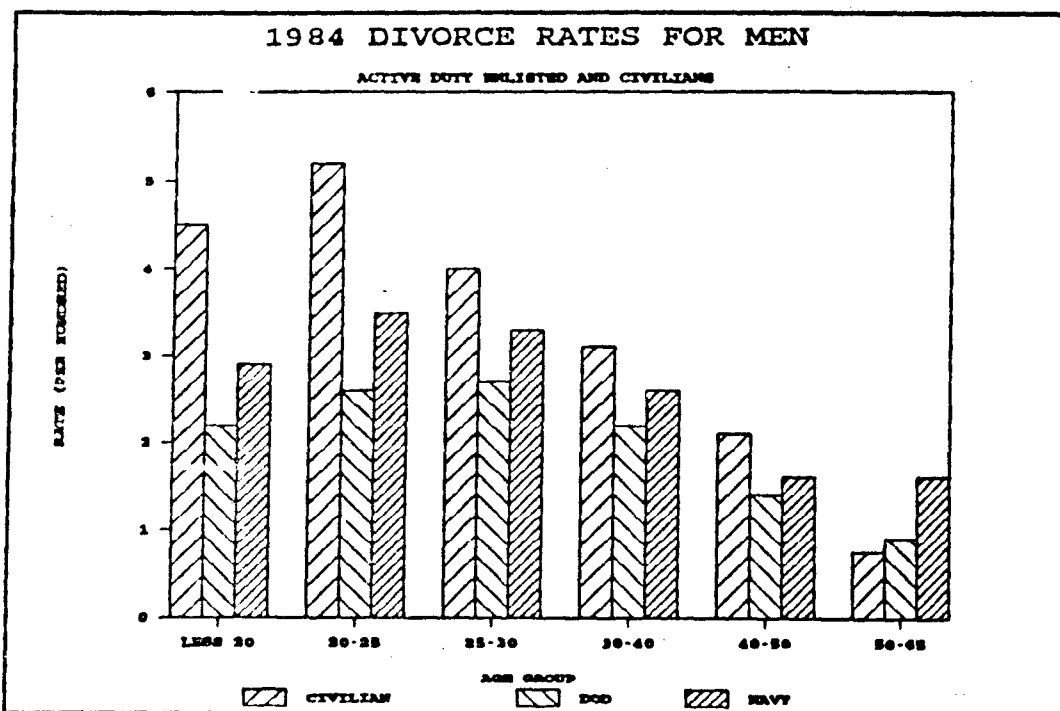


Figure 13 Fiscal Year 1984 Divorce Rates for Men (Active Duty and Civilian)

Source: U.S. Census Bureau and Defense Manpower Data Center

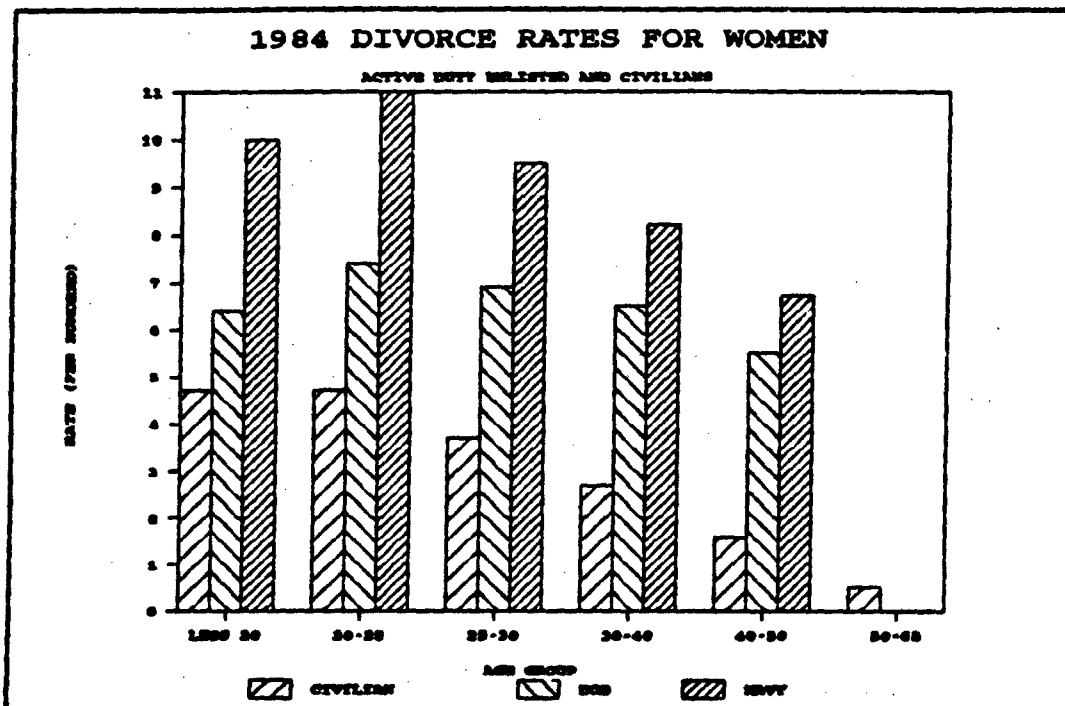


Figure 14 Fiscal Year 1984 Divorce Rates for Women (Active Duty and Civilian)

Source: U.S. Census Bureau and Defense Manpower Data Center

Divorce rates for military men followed the same age relationship as for civilian men, with a tendency to be consistently lower. The rates for Navy men, while higher than the composite service rates, were still lower than the general male population.

Military women divorced more frequently than civilian women, while divorce rates among Navy women were twice as high as civilian female rates, and nearly three times as high as the divorce rates for Navy men. The divorce rates for each gender, and in each age group, are statistically different at the 5 percent significance level.

The results of our statistical review of one year of data indicate that, while marriage rates for service men in general, and Navy men specifically, were lower overall, they were three times higher than civilians in the 17-20 age group. Divorce rates for all ages of military men were lower than their civilian counterparts; however, keeping in mind the relative sizes of the populations considered, lower rates do not equate to a lower proportion of divorces within each age group. Military women, relative to civilian women, appeared to get married young, get "unmarried" relatively quickly, and stay that way.

4. Comparison of Navy and DoD Divorce Rates Over Time

As shown in Table II, divorce rates for DoD and the Navy do appear to be different; Navy rates are consistently higher than those for DoD. While DoD rates remained fairly stable for the 11-year period, with only two peaks (1982 and 1986), Navy rates fluctuated. Navy rates peaked in 1981, dropped off the next year, and then climbed steadily to a new high in 1986 (relative to 1981). In 1987 and 1988 the Navy rate dropped off again to levels lower than pre-1981 rates.

Table III compares divorce rates over the 11-year period for DoD and Navy broken down by officer and enlisted personnel. Divorce rates of officers are consistently lower than those of enlisted personnel for both DoD and Navy. However, while Navy enlisted rates are consistently higher

Table II FISCAL YEAR 1977-1988 DIVORCE RATES (DoD vs. NAVY)

SERVICE	77	78	79	80	81	82	83	84	85	86	87	88
DoD	2.3	2.3	2.3	2.4	2.5	2.6	2.5	2.5	2.5	2.6	2.3	2.4
NAVY	2.7	2.5	2.5	2.7	3.1	2.8	3.0	3.1	3.2	3.3	2.6	2.5

Source: DoD Defense Manpower Data Center

Table III FISCAL YEAR 1977-1988 DIVORCE RATES (DoD vs. NAVY/OFFICER vs. ENLISTED)

	STATUS	77	78	79	80	81	82	83	84	85	86	87	88
DoD	ENLISTED	2.5	2.5	2.5	2.6	2.8	2.9	2.8	2.7	2.8	2.8	2.6	2.6
	OFFICER	1.4	1.4	1.5	1.5	1.6	1.6	1.5	1.5	1.5	1.6	1.4	1.4
NAVY	ENLISTED	3.1	2.8	2.7	3.0	3.5	3.2	3.3	3.4	3.6	3.7	2.9	2.8
	OFFICER	1.1	1.2	1.4	1.3	1.6	1.4	1.6	1.6	1.6	1.6	1.3	1.3

Source: DoD Defense Manpower Data Center

than those of DoD, rates for Navy officers are about the same as those for DoD officers.

Respectively, Tables IV and V present officer divorce rates by both population group and gender, and by population group alone. Divorce rates for black and hispanic officers are consistently higher than those for whites and "others" (predominantly Asians). These general differences also remain consistent within gender groups, with divorce rates for females being consistently higher than for males.

Tables VI and VII are similar to Tables IV and V, except that they present the enlisted picture, rather than the

Table IV FISCAL YEAR 1977-1988 DIVORCE RATES OF DoD OFFICER PERSONNEL BY POPULATION GROUP AND GENDER

<u>GENDER</u>	<u>POPULATION GROUP</u>	<u>77</u>	<u>78</u>	<u>79</u>	<u>80</u>	<u>81</u>	<u>82</u>	<u>83</u>	<u>84</u>	<u>85</u>	<u>86</u>	<u>87</u>	<u>88</u>
MALE	WHITE	1.3	1.3	1.4	1.4	1.5	1.5	1.4	1.4	1.3	1.4	1.2	1.3
	BLACK	1.8	1.5	1.7	1.6	1.5	1.8	1.6	1.6	1.8	1.8	1.5	1.5
	HISPANIC	1.6	1.7	1.6	1.8	1.4	1.3	1.3	1.4	1.2	1.2	1.7	1.3
	OTHER	0.9	1.6	1.3	0.8	1.9	1.3	1.5	1.2	1.7	1.2	1.2	0.8
FEMALE	WHITE	5.1	4.3	5.6	5.4	5.2	5.4	4.8	4.7	4.1	4.3	3.8	3.6
	BLACK	0.0	5.8	6.0	4.8	6.1	5.6	6.6	6.0	4.8	4.3	4.4	4.9
	HISPANIC	9.8	2.5	7.0	6.5	1.0	6.5	3.4	5.7	5.3	5.4	3.8	2.9
	OTHER	1.3	3.2	3.0	3.5	6.5	1.6	3.3	3.3	1.5	5.3	1.8	3.2

Source: DoD Defense Manpower Data Center

Table V FISCAL YEAR 1977-1988 DIVORCE RATES OF DoD OFFICER PERSONNEL BY POPULATION GROUP

<u>POPULATION GROUP</u>	<u>77</u>	<u>78</u>	<u>79</u>	<u>80</u>	<u>81</u>	<u>82</u>	<u>83</u>	<u>84</u>	<u>85</u>	<u>86</u>	<u>87</u>	<u>88</u>
WHITE	1.4	1.4	1.4	1.5	1.6	1.6	1.5	1.5	1.4	1.5	1.4	1.4
BLACK	1.8	1.6	1.8	1.7	1.8	2.0	2.0	2.0	2.1	2.0	1.8	1.9
HISPANIC	1.8	1.7	1.8	2.0	1.4	1.6	1.4	1.6	1.5	1.6	1.9	1.5
OTHER	0.9	1.7	1.4	1.1	2.2	1.3	1.6	1.4	1.7	1.6	1.2	1.0

Source: DoD Defense Manpower Data Center

officer view.

Divorce rates of enlisted appear to be different from those of officers for population groups. The divorce rates for whites are consistently higher than for the other race groups over

Table VI FISCAL YEAR 1977-1988 DIVORCE RATES OF DoD ENLISTED PERSONNEL BY POPULATION GROUP

POPULATION GROUP	77	78	79	80	81	82	83	84	85	86	87	88
WHITE	2.7	2.7	2.7	2.9	3.0	3.0	3.0	2.9	2.9	3.0	2.7	2.8
BLACK	2.2	2.1	2.4	2.2	2.4	2.5	2.5	2.5	2.5	2.5	2.3	2.4
HISPANIC	2.2	2.1	2.2	2.3	2.1	2.4	2.2	2.3	2.4	2.3	2.1	2.1
OTHER	1.4	1.3	1.4	1.4	1.8	1.7	1.8	1.8	1.9	1.9	1.6	1.7

Source: DoD Defense Manpower Data Center

Table VII FISCAL YEAR 1977-1988 DIVORCE RATES OF DoD ENLISTED PERSONNEL BY GENDER AND POPULATION GROUP

GENDER	POPULATION GROUP	77	78	79	80	81	82	83	84	85	86	87	88
MALE	WHITE	2.5	2.5	2.5	2.6	2.7	2.7	2.6	2.6	2.6	2.7	2.5	2.5
	BLACK	2.0	1.9	2.1	2.0	2.1	2.2	2.1	2.1	2.0	2.1	1.9	2.0
	HISPANIC	2.0	1.9	1.9	2.0	2.0	2.1	2.0	2.1	2.1	2.1	1.9	1.9
	OTHER	1.3	1.2	1.3	1.3	1.7	1.5	1.6	1.6	1.6	1.6	1.4	1.5
FEMALE	WHITE	8.0	7.5	7.5	7.5	7.7	7.7	7.8	7.3	7.4	7.4	6.3	6.5
	BLACK	7.0	7.5	7.9	7.5	6.5	6.5	6.4	6.5	6.1	5.9	5.4	5.5
	HISPANIC	6.4	6.1	6.8	6.3	5.3	7.6	6.0	6.8	7.3	6.7	4.8	5.1
	OTHER	5.3	6.2	4.8	5.3	6.3	7.2	6.6	6.3	7.7	6.6	4.7	5.8

Source: DoD Defense Manpower Data Center

the period 1977-1988. One point of consistency for both officers and enlisted personnel, by aggregate population group, is the decreasing trend in divorce rates since 1986.

As with officers, these general differences hold true within gender groups. Rates for the female/other groups have risen over the 11-year period, and approach the rates for hispanics and blacks. Again, divorce rates for women, by population groups, are consistently higher than those for men.

Next, in Tables VIII and IX, Navy officers by population group alone and by population group and gender are presented.

Table VIII FISCAL YEAR 1977-1988 DIVORCE RATES OF NAVY OFFICER PERSONNEL BY POPULATION GROUP

POPULATION GROUP	77	78	79	80	81	82	83	84	85	86	87	88
WHITE	1.1	1.2	1.4	1.3	1.6	1.4	1.6	1.6	1.5	1.6	1.3	1.3
BLACK	1.2	1.1	2.0	1.9	2.1	1.3	1.8	2.4	2.7	1.9	1.4	2.1
HISPANIC	2.1	1.7	1.7	1.7	1.8	2.5	1.1	1.8	2.6	3.1	1.5	1.6
OTHER	0.4	1.8	1.3	0.4	3.2	1.2	2.0	1.2	1.5	1.8	1.6	0.9

Source: DoD Defense Manpower Data Center

The divorce rates for Navy officers by population group appears to be similar to those for the same groups for DoD. On the average, rates are higher among blacks and hispanics than among whites, and lower for others. Rate extremes are attributed to the small population sizes in each category.

When broken down by gender, rates for Navy men are consistently lower than for DoD men across population groups, and they follow the same trends as the aggregate. Rates for

Table IX FISCAL YEAR 1977-1988 DIVORCE RATES OF NAVY OFFICER PERSONNEL BY GENDER AND POPULATION GROUP

<u>GENDER</u>	<u>POPULATION GROUP</u>	<u>77</u>	<u>78</u>	<u>79</u>	<u>80</u>	<u>81</u>	<u>82</u>	<u>83</u>	<u>84</u>	<u>85</u>	<u>86</u>	<u>87</u>	<u>88</u>
<u>MALE</u>													
	WHITE	1.1	1.2	1.3	1.3	1.4	1.3	1.4	1.5	1.4	1.4	1.1	1.2
	BLACK	1.2	1.2	1.4	1.1	2.0	0.8	1.5	1.8	2.1	1.6	1.1	2.0
	HISPANIC	1.6	1.4	1.5	1.5	1.8	1.6	0.9	1.3	1.6	2.8	1.3	1.5
	OTHER	0.4	2.0	1.1	0.2	2.9	1.2	1.8	0.9	1.6	1.7	1.3	0.7
<u>FEMALE</u>													
	WHITE	3.8	3.9	5.8	4.4	5.6	5.3	5.6	4.9	4.8	3.7	3.3	2.9
	BLACK	0.0	0.0	17	20	5.7	7.5	6.4	10	8.5	4.3	3.6	3.2
	HISPANIC	18	13	8.0	6.9	0.0	30	7.1	9.0	19	8.0	4.7	2.2
	OTHER	0.0	0.0	2.6	2.3	7.1	0.0	5.9	5.6	0.0	2.4	5.9	3.6

Source: DoD Defense Manpower Data Center

white Navy female officers appear lower than those for the same DoD group. Comparison of the other population groups is difficult and inconsistent because of the small group sizes.

Again, following the pattern established earlier in the tabular review, the next two tables (Tables X and XI) present Navy enlisted divorce rates by population group, and by population group and gender.

Aggregate divorce rates for Navy enlisted personnel by population group are generally the same across all groups except "other," which are significantly lower. Rates for Navy/other are lower than for DoD/other, while Navy rates for the remaining population groups are consistently higher than for DoD.

Table X FISCAL YEAR 1977-1988 DIVORCE RATES OF NAVY ENLISTED PERSONNEL BY POPULATION GROUP

POPULATION GROUP	77	78	79	80	81	82	83	84	85	86	87	88
WHITE	3.3	3.0	3.0	3.2	3.8	3.5	3.6	3.7	3.8	3.9	3.1	3.0
BLACK	3.2	2.4	3.0	2.6	3.6	3.1	3.1	3.3	3.4	3.6	2.8	2.6
HISPANIC	3.3	2.6	2.5	2.7	2.6	3.1	3.0	3.3	3.3	3.8	2.7	2.5
OTHER	1.1	0.9	1.0	1.2	1.3	1.2	1.5	1.4	1.6	1.5	1.3	1.1

Source: DoD Defense Manpower Data Center

Table XI FISCAL YEAR 1977-1988 DIVORCE RATES OF NAVY ENLISTED PERSONNEL BY GENDER AND POPULATION GROUP

GENDER	POPULATION GROUP	77	78	79	80	81	82	83	84	85	86	87	88
MALE	WHITE	3.1	2.8	2.8	3.1	3.4	3.1	3.2	3.3	3.4	3.5	2.9	2.8
	BLACK	3.1	2.2	2.7	2.2	3.2	2.6	2.6	2.8	2.8	3.1	2.5	2.2
	HISPANIC	2.9	2.4	2.3	2.5	2.4	2.8	2.7	3.0	2.8	3.1	2.5	2.3
	OTHER	1.0	0.8	0.9	1.1	1.2	1.1	1.5	1.3	1.4	1.4	1.2	1.1
FEMALE	WHITE	12	10	9.3	10	13	10	11	10	11	10	6.6	6.3
	BLACK	4.5	11	14	12	11	11	10	10	10	10	5.9	5.5
	HISPANIC	17	9.9	8.2	9.2	9.9	11	8.5	9.5	12	13	5.8	5.3
	OTHER	7.5	11	11	9.9	11	7.8	9.3	7.8	12	8.6	5.7	3.9

Source: DoD Defense Manpower Data Center

These differences are consistent for Navy men. Again, comparison for females by population groups is difficult because of rate inconsistencies caused by small group sizes. However, rates for women are still higher than for men.

Tables XXXVI through XXXIX in Appendix D support the remaining observations, which will be presented in narrative form. Among white enlisted Navy men, the 18-30 age groups had the highest divorce rates. Divorce rates then decreased as age increased over the 31 to above 50 range. Among blacks and hispanics of this grouping, divorce rates increased with age within the 18-30 year olds, peaked in the 26-30 age group, and then generally decreased with age. The rates for the "other" category display the same increase-peak-decrease pattern. However, rates peak earlier (in the 21-25 age group). Looking at Navy enlisted women by population and age group, the disaggregated rates for women are inconsistent and generally not useful for comparison because the population in each cell is too small.

Turning to divorce rates of Navy male officers, relative to the other population groups, white Navy male officers have more consistent divorce rates. Divorces peak in the 26-30 age group and decrease over the 31 to 50-plus range. The rates for the 21-25 and 31-40 age groups are similar. All other population groups also reflect the highest rates in the 26-30 age group, and the tendency for rates to decrease with increases in age. However, of these groups, only blacks have recently (since 1984) shown significantly higher divorce rates--higher even than the estimated peak age group--in the 21-25 age group.

Disaggregate divorce rates of Navy female officers again suffer from small cells that are relatively difficult to compare. Whites appear to have the most consistent rates over the 21-40 range, with no distinctive peak age group. Blacks and hispanics seem to peak, or at least experience an increase in divorce, in the 26-40 age range. The "other" group experience divorce most frequently in the 31-40 age group, and almost not at all in any of the other age groups.

C. THE STATISTICAL EFFECT OF DIVORCE ON RETENTION

1. Data

The data for this portion of the thesis are taken from the 1985 DoD Survey of Officer and Enlisted Personnel. This survey, conducted by the Defense Manpower Data Center (DMDC), was designed to provide a systematic look at "...personal and military background, economic status, family composition, rotation experience, preparedness, and plans for continuing in the military, given alternative policies." [Ref. 78] Almost 19,000 active-duty officers and over 70,000 active-duty enlisted personnel responded to the 1985 survey. The data reported for over 17,000 observations were usable for the estimation of the retention model. A supplement to the survey, The Users Manual and Codebook, provided the documentation for the data base.

2. The Model

Multivariate regression techniques are used to explore the relationship between reenlistment and divorce. The conceptual model specified for this thesis is a choice model based on stated intentions. As several studies point out, an individual's intent to stay or leave an organization can be considered an immediate precursor to actual turnover [Ref. 79].

The theoretical model for this study is:

Reenlistment Intentions = f{Personal Demographics, Job Factors, Tenure, Economic Factors, Personal Influences, Alternatives}

where:

Personal Demographics = basic biographic variables;

Job Factors = variables classifying the individual's occupation and describing job satisfaction levels;

Tenure = variables describing time in service;

Economic Factors = variables measuring financial status and financial satisfaction level;

Personal Influences = variables describing factors of military life that affect family life;

Alternatives = variables describing perceptions of civilian employment opportunities.

The dependent variable used to measure an enlisted individual's intent to reenlist is constructed from responses to the question of the likelihood of reenlistment at the end of the current term of service (question E30). This variable

was dichotomized to capture the stay/leave intention: it was set equal to unity if the probability of reenlisting was seven of ten or greater, and set equal to zero otherwise.

3. Statistical Method

LOGIT analysis is used to estimate the probability that an enlisted individual in the Navy will reenlist. Specifically, because the actual probability for a service member to reenlist is an unobserved continuous random variable defined only by the observed behavior of reenlisting or not reenlisting, it is appropriate to use a binomial logit model to predict the probability of reenlistment. Logit analysis estimates how the probability of an individual staying in the Navy is related to a set of explanatory variables.

The logit model is associated with the cumulative logistic probability function where, if P_i is the probability of staying or leaving and $X_1, \dots, X_k$ is a set of individual characteristics, the form of the general equations is:

$$P_i = F(Z_i) = 1 / (1 + e^{-(\alpha + \sum_{j=1}^k \beta_j X_{ij})})$$

If logs are taken, the basic model becomes:

$$\ln(P/1-P) = \alpha + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_k X_k$$

where P equals the probability of reenlisting. The LOGIST procedure calculates maximum-likelihood estimates (MLEs) for the parameters associated with each independent variable by using the modified Gauss-Newton method. The covariance matrix

of the MLEs is obtained by inverting the observed information matrix evaluated at the MLEs. The MLE chi-square (Wald) statistic for testing the hypothesis that a parameter is zero is calculated by computing the parameter estimate divided by its standard error and squaring the result. The standard error is estimated by calculating the square root of the appropriate diagonal element of the estimated covariance matrix. This hypothesis test assumes the estimators are asymptotically normally distributed. [Ref. 80] The effect of each individual explanatory variable on the retention decision is found by taking the derivative of the probability with respect to the individual explanatory variable. For the logistic function, this derivative equals:

$$(\exp(\beta x) / (1 + \exp(\beta x))^2) (\beta_i)$$

which will yield the change in the probability of retention given a unit change in the explanatory variable.

4. Variables

a. **Dependent Variable.** The dependent variable used in this thesis was constructed from the continuous variable LIKELIHOOD OF REENLISTING (E30), which asked the question, "How likely are you to reenlist at the end of your current term of service? (Assume that all special pays which you

currently receive are still available.)" The frequency of responses are given in Table XII.

Table XII FREQUENCY OF ENLISTED NAVY RESPONSES TO QUESTION E30 (LIKELIHOOD OF REENLISTMENT), 1985 DoD SURVEY OF OFFICER AND ENLISTED PERSONNEL

<u>RESPONSE</u>	<u>FREQUENCY</u>	<u>PERCENT ACTUAL/WEIGHTED</u>
Don't know	573	3.3 / 3.5
I plan to leave the service	3,921	22.7 / 27.4
I plan to retire	1,055	6.1 / 6.0
Question not answered	96	0.6 / 0.6
(0 in 10) No chance	545	3.2 / 4.0
(1 in 10) Very slight possibility	628	3.6 / 3.8
(2 in 10) Slight possibility	489	2.8 / 2.8
(3 in 10) Some possibility	759	4.4 / 4.6
(4 in 10) Fair possibility	560	3.2 / 3.3
(5 in 10) Fairly good possibility	759	4.4 / 4.5
(6 in 10) Good possibility	901	5.2 / 5.2
(7 in 10) Probable	733	4.2 / 4.1
(8 in 10) Very probable	908	5.3 / 4.9
(9 in 10) Almost sure	1,572	9.1 / 7.6
(10 in 10) Certain	3,785	21.9 / 17.8

Source: 1985 DoD Survey of Officer and Enlisted Personnel

Table XII also reflects the weighted percentage of response frequencies. The weighted percentages are important because the survey coding provides a means of weighting the data to better estimate population responses from the sample responses. The dependent variable "INTENT" was constructed by coding responses of 10 reenlistment probabilities:

7 in 10 or greater = 1
Less than 7 in 10 = 0

Responses of "plan to leave" were coded as 0; "don't knows", "plan to retire", and "not answered" were deleted from the sample. This coding left a sample of approximately 14,000 observations for the regression procedure.

b. Independent Variables. The variables used in this thesis to explore the reenlistment behavior of Navy enlisted personnel are grouped into six categories: personal demographics, job factors, tenure, economic factors, personal influences, and alternatives. The responses chosen from the 1985 DoD Survey as potential variables are described in Table XIII.

The variable AGE is continuous, with a maximum setting of 55 years. This ceiling will eliminate outliers from the data. Past studies have shown that age has a direct correlation to the stay/leave decision [Ref. 81]. The 55 year cut-off was reached by combining maximum age at first enlistment (32) and years of service required for retirement (20). Enlisted individuals above 55 years of age have already passed the point where a divorce may affect the decision to reenlist or retire.

GENDER, a dummy variable equal to 1 for females, measures the general difference between male and female propensity to reenlist.

SCHOOL measures the discrete responses to the level of education obtained by an individual. Higher levels of education increase civilian job opportunities and, therefore,

Table XIII INDEPENDENT VARIABLES

Personal Demographic Variables

<u>Variable</u>	<u>Question ID</u>	<u>Value Coding</u>
AGE	O36E35	Continuous (max 55)
GENDER	O35E34	0 = Male 1 = Female
SCHOOL	E42	0 = NHS Grad 1 = HSG/GED 2 = Some College
RACE	RACE4	0 = White 1 = Other
SINGLE	O51E48	0 = Yes 1 = No
DIVORCED	O51E48	0 = No 1 = Yes
MARRIED	O51E48	0 = No 1 = Yes
REARRY	O51E48	0 = No 1 = Yes
SEPARATE	O51E48	0 = No 1 = Yes
CHILDREN	O71E68	0 = No 1 = Yes
CSPOUSE	MS2	0 = No 1 = Yes
MSPOUSE	MS2	0 = No 1 = Yes
DIVORCE	MS2	0 = No 1 = Yes

Job Factors

<u>Variable</u>	<u>Question ID</u>	<u>Value Coding</u>
OCC1 thru OCC10	EOCC2	0 = No 1 = Yes

Economic Factors

<u>Variable</u>	<u>Question ID</u>	<u>Value Coding</u>
PAYGRADE	O5E5	Continuous (1-9)
MONEY	O106E102	Discrete 0 = Very Satisfied 1 = Very Dissatisfied
Tenure		
LOS	O6E6	Continuous Years of Service (1 - 20)

Personal Influences

<u>Variable</u>	<u>Question ID</u>	<u>Value Coding</u>
ONSHIP	O4E4	0 = No 1 = Yes
MILSAT	O110E106	Discrete 0 = Very Satisfied 1 = Very Dissatisfied
PCS	O22E21	Continuous (0 - 10+)

Alternatives

<u>Variable</u>	<u>Question ID</u>	<u>Value Coding</u>
CIVJOB	O96E92	Discrete 0 = No Chance 1 = Sure

Source: 1985 DoD Survey of Officer and Enlisted Personnel

increase the propensity to leave the military.

RACE is set equal to 1 for non-whites.

Dummy variables reflecting an individual's current marital status were constructed to measure the effect of more variations in status than the usual simple differentiation of single versus married. These variables are hypothesized to show whether divorced individuals have a stronger propensity to reenlist than single, never-married or married, never-divorced individuals. Marital status was deliberately isolated from the combined effects of type of spouse or the influence of children. SINGLE represents single, never-married personnel while MARRIED includes only married, never-divorced individuals. REMARRY reflects married, previously-divorced status; SEPARATE includes married individuals who are currently separated. DIVORCED describes those who are single, previously-married. Another variable, DIVORCE, was created to describe the effect on the reenlistment propensity of individuals who had (coded as 1) or had not (coded as 0) experienced a divorce since joining the Navy.

CSPOUSE and MSPOUSE are coded 1 if the member's spouse is civilian or military. They measure the indirect influence of a civilian or military spouse on the member's reenlistment decision. These variables were included because previous research addresses difficulties in the adaptation of civilians to military life as contributing to the member's decision to leave the service.

PAYGRADE is a continuous variable (1-9) that measures the amount of income a military individual receives. The variable MONEY is constructed from responses to the question of overall satisfaction with family income. Originally scaled from 1 (very satisfied) to 7 (very dissatisfied), MONEY is recoded as 1 if the member responded with a 4 or better, and 0 if otherwise.

LOS is a continuous variable with a maximum value of 20 years. The factors which influence the reenlistment decision before and after retirement eligibility is reached are different. The greater the length of service, the stronger the propensity to reenlist.

ONSHIP reflects the member's current duty location, and is coded 1 when they are currently assigned to a ship. Other studies have found that sea duty has a negative effect on reenlistment propensity. We hypothesize that the most recent experience, sea duty or no sea duty, will have an even greater effect on the reenlistment decision.

MILSAT is a discrete variable measuring the member's current overall satisfaction with the military lifestyle. As addressed in the literature review, overall job satisfaction is positively related to the propensity to remain in a job. Because the military is more a life style than strictly an occupational choice, MILSAT was used, rather than job satisfaction. MILSAT is coded from the scaled responses which range from 1 (very dissatisfied) to 7 (very satisfied).

MILSAT assumes the value of 1 if the individual responded in the 1 to 4 range of dissatisfaction, or zero, if satisfied.

PCS is a continuous variable reflecting the number of moves an individual has made in the course of their military career. Research hypothesizes that increased geographic mobility generally serves to increase stress, particularly among married service members. Increased marital stress due to the requirements of military life, including frequent geographic relocation, is thought to decrease the member's propensity to reenlist.

Variables OCC1 through OCC10 are dummy variables which describe the member's occupational field, according to the DoD Occupation Manual. These broad occupational categories are:

- OCC1 - Direct Combat
- OCC2 - Electronic Equipment Repair
- OCC3 - Communications and Intelligence
- OCC4 - Medical and Dental
- OCC5 - Other Technical
- OCC6 - Support and Administrative
- OCC7 - Electrical/Mechanical Equipment Repair
- OCC8 - Crafts
- OCC9 - Service and Supply
- OCC10 - Non-occupational

Depending upon the civilian economy, some occupational fields offer greater income or advancement potential, which may influence the reenlistment decision.

CIVJOB is a discrete variable describing the individual's perception of their probability to obtain a good civilian job. The greater the perceived probability of an

actual alternative to the current job, the greater the propensity will be to leave that job. The survey responses ranged, by percent of certainty of finding a good civilian job, from 1 (no chance) to 11 (100 percent certain). CIVJOB splits this range, coding responses of seventy percent certainty or greater as 1, and 0 if the member is less than seventy percent certain of job prospects.

D. MODEL ESTIMATION FOR TURNOVER BEHAVIOR

Model estimation of turnover behavior was conducted specifically to determine whether or not being divorced while in the Navy would affect an enlisted person's propensity to reenlist. Initial analysis began by examining the frequency of responses within each selected variable. Crosstabulating the more germane independent variables with the dependent variables INTENT and DIVORCE yielded a broader understanding of the divorce experience of Navy enlisted personnel and the relationship between divorce and reenlistment behavior.

Crosstabulation of DIVORCE by INTENT revealed an unequal distribution among the four cells. Only an estimated 15 percent of the Navy enlisted population in 1985 had ever experienced the event of divorce. Of those, 38 percent fell in the "intend to leave" category, while 62 percent declared an intent to stay in the Navy. Of those enlisted personnel who had no divorce experience, 59 percent intended to leave; 41 percent intended to stay. These results would lead us to

expect that the coefficient for DIVORCE will be positive; divorce increases the individual's propensity to reenlist.

RACE was defined as white or non-white because of the small cell frequencies in the black, hispanic and "other" categories, especially for women. Crosstabulation of INTENT by RACE (Table LIX) shows relatively little difference in percent distribution over the four cells. Therefore, we expect RACE to have a small amount of effect.

Table LVI shows the results of crosstabulating INTENT with the member's current marital status; variables SINGLE, MARRIED, DIVORCED, REMARRIED and SEPARATED. Of those who were single, never-married, only 29.3 percent intended to stay in the service. Those individuals who were divorced or remarried stayed at much higher rates; 56.4 and 67.9 percent, respectively. Married, never-divorced individuals also stayed at a higher rate, 53.4 percent. Interestingly, those individuals who were separated from a spouse behaved more like the single, never-marrieds; 51.8 percent intended to leave while only 48.2 percent intended to stay.

Table LVIII shows that the Navy enlisted population is approximately 91 percent male and 9 percent female. Men and women displayed almost equal propensities in their stay/leave intentions, with a higher percentage of both (55.5 percent and 56.7 percent, respectively) reporting the intent to leave.

The crosstabulation of INTENT by ONSHIP (Table LVII) was interesting. Only 45.3 percent of the enlisted population was

estimated to be assigned to a ship. Of those individuals, 65.5 percent were leavers while 34.5 were stayers. Members not assigned to a ship had a higher propensity (52.8 percent) to stay.

Looking at various crosstabulations of the variable DIVORCE gives an idea of the characteristics of those individuals who have experienced divorce.

Table LXII (RACE/ETHNIC GROUP) shows that 76.7 percent of the Navy enlisted population (as estimated by weighted responses to the survey) was white. Blacks made up 11.2 percent of the population while 6.5 percent and 5.6 percent were hispanics and "others", respectively. Whites had the highest percentage of divorce experience, 16.9 percent, followed by blacks and "others" with 12 percent and 11.6 percent. Only 9.4 percent of hispanics reported ever having been divorced.

Consistent with the earlier statistics on divorce, Table LXIV shows that Navy enlisted women experienced divorce at a higher percentage than men; 20.8 percent of women and 14.9 percent of men had been divorced.

Education seems to have an effect on who experiences divorce. Table LXVI shows that about 70 percent of Navy enlisted personnel were high-school graduates or GED recipients. This category had the lowest experience with divorce, 13.9 percent. Those individuals with less than a

high-school diploma or some college experienced divorce more often (18 and 19 percent, respectively).

Again, the variable ONSHIP reveals interesting information when crosstabulated with DIVORCE. Table LXIII shows that the population assigned to ships had a smaller percentage (11.7) of divorces than the population assigned ashore (18.7).

Four separate logit models of reenlistment behavior were run using variations of marital status to determine if differences in reenlistment intentions are affected by an individual's experience with divorce or their current marital status. For all four models, the maximum-likelihood ratio test allowed for the rejection of the null hypothesis--that the coefficients are all equal to zero--at the 90 percent level of significance.

Models 1 and 2 contained the independent variables listed in Table XIII, using only the variable DIVORCE to reflect marital status. The exact results of these models are given in Table LIV. Model 1 predicts reenlistment intentions with 75.3 percent accuracy with a higher tendency toward false positive predictions. This model reflects that being other than white, having children, and having been divorced all have a positive effect in that they increase the propensity to reenlist. The propensity to reenlist also increases with increased age, length of service, and paygrade. Of the last three variables, age and length of service are fairly well correlated at $-.519$ as are paygrade and length of service at

- .445. Age and paygrade have only a correlation value of - .119. Model 1 also reflects that being a woman, having more education, and being married to another service member decreases an individual's propensity to reenlist. As expected, the better an individual perceived their chances of finding a good civilian job, the higher their propensity to leave the service. Overall dissatisfaction with military life and family income also affected reenlistment negatively, as did being assigned to a ship at the time of the survey. The PCS and occupation groups had strange effects. Reenlistment propensity increases with more moves, while each occupation has a negative effect.

Model 2 is the same as model 1, less the occupation variables (almost all had very insignificant p-values). As Table LIV shows, the relative effects of each independent variable remained the same except for the spousal categories, MONEY, and PCS. All other things equal, members with civilian spouses had higher reenlistment propensity than those married to other service members. The p-value for MONEY decreased from a 10 to a 30 percent level of significance, while all of the other variables became statistically significant at any level of significance. Standard error values also decreased while the coefficients of most variables increased. This model also predicted with 75.1 percent accuracy, again, with a higher tendency toward false positive predictions.

Models 3 and 4 were identical to models 1 and 2 except that DIVORCE was replaced by the individual variables for marital status, and the spouse categories were omitted.

The results for model 3 (Table LV) are fairly consistent with those of the first two models, and better reflect the hypothesized effects of each variable on the propensity to reenlist. Again, the significance of the marital status variables is questionable; only the p-value for DIVORCED was close to the 10 percent significance level. The occupation group coefficients were negative with the exception of OCC1 (general combat skills). Model 3 matched model 1 in predictive qualities.

Model 4 contained the same independent variables as model 3 with the addition of the marital status category SINGLE. As with model 2, the occupation groups were dropped. The changes between models 3 and 4 (Table LV) almost repeated those of models 1 and 2. The signs of the coefficients reversed for all but the DIVORCED category of the marital status variables, making them suspect for containing some degree of multicollinearity. Generally, the standard error values decreased and the coefficients have become much more significant; all of the p-values reflect better than 1 percent significance levels. Although the coefficients became more statistically significant, their influence on the reenlistment propensity generally decreased. Of the four models, model 4 is the best predictor of reenlistment propensity, with 79

percent accuracy, and false positive and false negative rates of 23.2 percent and 19.6 percent, respectively.

Although unrefined, these reenlistment models indicate that divorced individuals have a higher propensity to reenlist than singles, higher even than their married counterparts who have never divorced. These initial results have tremendous implications for the increased concern over quality of life issues, and certainly deserve further quantitative and qualitative study.

IV. FAMILY SUPPORT SERVICES

A. SUPPORT SERVICES EVALUATION

Because of the qualitative nature of the study of support services, interviews and tabular comparisons provided the best methods of accomplishing the study. Specifically, interviews with key staff members of the Office of the Assistant Secretary of Defense (Force Management & Personnel), Navy Family Support Services (NMPC-66), Chief of Naval Operations (OP-15) and Family Service Center Naval District Washington provided the majority of information used in the study.

As an adjunct to the thesis, we investigated the availability of support services provided by a relatively small Family Service Center, FSC Monterey, California. The Officer-in-Charge (OIC), LCDR Virginia Graff, contributed significantly to the study by providing responses to our research questions from a somewhat unique position: a single, female OIC of a center with a staff of five people, and no assigned counselors. Having developed numerous professional contacts among the U. S. Army's Department of Social Services at nearby Fort Ord, she was able to arrange interviews with various clinical and religious counselors to whom she had referred FSC Monterey clients.

To provide a comparison of military and civilian support services, we queried the fifty largest industrial and service corporations doing business in the United States, as listed in the Rand-McNally 1990 Commercial Atlas & Marketing Guide (121st edition), questioning their response to employees who ask for, or are evaluated as requiring, help in managing family-related stress. The cover letter and specific survey questions are presented in Appendix J. We also explored the approach to providing support services by Navy commands with a large civilian contingent by interviewing the Director of the Family Support Division at Naval Avionics Center, Indianapolis, Indiana.

A local survey was prepared to be administered to students at the Naval Postgraduate School, Monterey, California, to determine the extent of their personal knowledge concerning available counseling resources. It also contained questions designed to elicit the experiences, perceptions and observations of a population that has been responsible for providing counseling to members of the military during operational tours prior to attending postgraduate school. Unfortunately, time constraints on the preparation of this thesis precluded administering the survey. However, it is included as Appendix K to provide follow-on researchers with a survey document, should they decide to pursue the issue.

From initial contact through the completion of the thesis, ongoing dialogue with topic area experts has been candid, informative, and useful in our research.

B. MEASURES OF FSC EFFECTIVENESS

Concern with family issues and their effect on readiness is a legitimate one, as supported by the following statistics prepared by NMPC-66 for use in a 1989 briefing (Table XIV):

Table XIV NAVY DEMOGRAPHICS, 1989

Active Duty:	599,744
Family Members:	705,888
Married:	50% of Active Duty 80% of Career Personnel - 48% of Enlisted - 75% of Officers
Marriage Trends since 1966:	
Officer:	stable between 70% and 74%
Enlisted:	up from 36.5% to 47.6%
Temporary single parents when ships are deployed:	84,000
Children at home:	over 70% - 50% are children under six years old
Working Spouses:	50%

Source: Naval Military Personnel Command (NMPC-661)

As seen in Table XIV, the Navy career force is predominantly married. It is reasonable to assume that the members of that force share the same domestic concerns as their civilian counterparts, including concerns regarding the

availability of adequate family and marriage counseling service.

How good are the FSCs at providing counseling? What are the qualifications of the personnel hired to staff the FSCs? How does the level of service given to Navy people stack up against the same sort of service provided by large civilian organizations? The answers to these questions are at the heart of any evaluation of the adequacy of the Navy's efforts to address family support service issues, in general, and the manner in which the Navy addresses support for its people in the process of divorce, specifically.

One measure of how good the FSCs are in providing counseling is to evaluate the availability of service. In fiscal 1987, Family Service Centers were available to approximately 85 percent of the Navy population, with 74 centers fully or partially on-line. Plans call for 80 centers by fiscal 1992. In fiscal 1989, FSCs generated approximately 4.0 million contacts with members and families, providing programs dealing with deployment and relocation assistance, information and referral services, spouse employment assistance, financial management, as well as personal/marital/family counseling [Ref. 82].

The fact that FSCs provide such a diverse array of services is both a strength and a weakness; diversity allows the FSC sufficient flexibility to address many needs within the Navy, but it prohibits the organization from focusing on

any one area of expertise. Marital counseling, for example, accounted for only about two percent of FSC counseling activity in 1988. While this subset of the thesis focuses on the quality of counseling service provided by FSCs to Navy persons contemplating divorce, it is important to remember that marriage counseling is only one small part of the FSC service package. It is also important to note that availability of services varies from center to center. For example, large FSCs, such as those in Norfolk, Virginia and San Diego, California, provide a greater range of services than do smaller FSCs such as Monterey. However, the ability to utilize nearby military medical and family support facilities on a referral basis allows even small centers to offer a significant array of services.

Fiscal 1989 statistics presented in Table XV provide an idea of who is taking advantage of the services offered by FSCs. Of particular note, 69 percent of FSC "clients" were married, and 78 percent were in pay grades E-6 or below [Ref. 83].

Table XVI provides information concerning the source of referrals to Family Service Centers. Note that more than half, or 57 percent, were self-referrals--people who recognized a need for FSC services and initiated contact on their own. An additional 20 percent were command referrals, or personnel directed to FSCs by commands which recognized the centers as valuable sources of personnel management help.

Table XV FSC CLIENT DEMOGRAPHICS

CLIENT CATEGORY	NUMBER	PERCENTAGE DISTRIBUTION
Adult Male	78,094	43.0
Adult Female	75,964	42.0
Child Male	14,260	7.5
Child Female	13,068	7.5
Total	181,386	100.0

MARITAL STATUS

Married	83,204	69.3
Single	21,908	18.2
Divorced	4,384	3.7
Separated	3,870	3.2
Widow(er)	2,838	2.4
Single Parent (w/custody)	1,184	1.0
Dual Career Military	2,462	2.0
Unknown	222	.2
Total	120,072	100.0

PAY GRADE

E1 thru E3	18,052	15.4
E4 thru E6	62,966	53.8
E7 thru E9	10,136	8.7
W1 thru W4	304	.3
O1 thru O3	3,176	2.7
O4 thru O6	1,370	1.2
O7 thru O10	28	*
Other Pay Grade	16,808	14.7
Not Applicable	3,706	3.2
Total	117,008	100.0

* Less than 0.05 percent

Source: Naval Military Personnel Command (NMPC-C01)

A second measure of how good the FSCs are at providing counseling, as well as a reasonable measure of the Navy's commitment to providing support services, is the funding level of FSC Programs. Fiscal 1989 expenditures reached \$23 million, for an average cost of \$5.75 per contact. Because of

Table XVI SOURCE OF REFERRALS

CATEGORY	NUMBER	PERCENTAGE DISTRIBUTION
Self	27,948	57.0
Command	9,884	20.0
Chaplain	1,818	3.7
Legal	376	1.0
Medical Military	4,052	8.2
Volunteer	548	1.1
Civilian Agency	1,294	2.6
Military Agency	<u>3,136</u>	<u>6.4</u>
Total	49,056	100.0

Source: Naval Military Personnel Command (NMPC-661)

the diversity of services offered by FSCs, the average cost figure is less significant when evaluating counseling cost at an FSC than it would be at a facility which provides only clinical counseling. However, the Navy uses aggregate cost figures, rather than breaking down costs by individual service category, to determine expenditures on Family Support Programs. Therefore, the \$5.75 average cost is presented as a standard measure. Obviously, an individual family counseling session is more expensive than providing a day-care referral. Yet, given the volume of client assistance provided at an FSC, applying aggregate cost figures to evaluate effectiveness is a reasonable approach by the Navy.

Obviously, a good program must be well-managed. Too often, well-meaning program initiatives die on the vine because they are "orphans"; nobody within the Navy Department owns them, fights for them or, most importantly, funds them. Simultaneous with the institution of the FSC system, the

headquarters staff responsibilities of the Family Support Program were consolidated under the Commander, Naval Military Personnel Command (NMPC), with a single director of the Navy Family Support Program (FSP). The FSP staff is responsible for a wide variety of programs. It is divided into three branches: Family Services, Overseas Duty Support and Family Advocacy. The Family Services Branch (NMPC-661), is responsible for Family Services policy, as well as Family Service Center program management, staff training, and quality assurance guidance and site visits. A pending reorganization will combine NMPC-64, the Community Support Division, with NMPC-66 to form a new division, Personal Family and Community Support (PERS-66).

Family Services headquarters staffing is an issue which must be given a hard look. In addition to the responsibilities previously mentioned, NMPC-66 is often asked for statistical data in answer to legislative queries or to support program modifications or initiatives from other governmental agencies, such as the Department of Health and Human Services. As presently configured, NMPC-66 spends far too much time responding to short-term tasking; program management, staff training and quality assurance are relegated to secondary importance. The number of site visits during 1990, for example, totaled twenty-four. Adding two Manpower, Personnel and Training (MPT) billets to the staff would provide the requisite skills necessary to support the day-to-

day operations of the division, and would allow the clinical staff members to focus on divisional responsibilities more suited to their expertise.

The second question to be addressed is the question of FSC staff qualification. The number of personnel assigned to a Family Service Center varies from ten to fifty-four, depending on factors such as the number of active duty personnel in an area, the number of deploying commands, and the mission of the base served by the FSC. Table XVII shows the minimum staffing requirements suggested by NMPC-661.

Table XVII SUGGESTED MINIMUM STAFFING FOR AN FSC

- Director
- Deputy
- Counselor(s)
- Family Advocacy Specialist
- Information and Referral Specialist
- Program Coordinator
- Spouse Employment Assistance Program Coordinator
- Relocation Coordinator
- Administrative Staff

Source: Naval Military Personnel Command (NMPC-661)

According to the fiscal 1989 Family Support Program Management Information System (FSPMIS), permanent staff positions numbered 865, or 114 short of full staffing, as shown in Table XVIII.

The quantity of staff appears to be adequate, but what about the quality? Of the 865 permanent staff members, approximately 20 percent, or 173 staffers, are professional counselors. To be hired as a clinical staffer at a Family

Table XVIII FISCAL 1989 FSC PERMANENT STAFF SHORTFALLS

	<u>MILITARY</u>	<u>CIVILIAN</u>	<u>CONTRACTOR</u>	<u>TOTAL</u>
AUTHORIZED:	316	574	89	979
ACTUAL:	<u>274</u>	<u>503</u>	<u>88</u>	<u>865</u>
SHORTFALL:	42	71	1	114
SHORTFALL AS A PERCENTAGE OF AUTHORIZED:				
	13.3%	12.4%	<1%	11.6%

Source: Naval Military Personnel Command (NMPC-661)

Service Center, the applicant must meet professional criteria more rigorous than many state requirements for licensing as a clinical counselor. Applicants for FSC clinical staff positions must possess at least a Master's Degree in Social Work, Psychology or a similar Human Relations field; they must have a state license or credentials from a national association or regulatory body such as the National Association of Social Workers (NASW); and they must pass a written examination supervised by NASW and have at least two years of experience in supervised clinical practice. As of November 1990, approximately 90 percent of FSC counselors were "credentialed"; incumbents in counseling positions were given three years in 1988 to gain their credentials, and the remaining ten percent are actively pursuing them.

Clinical staffers at FSCs are involved in a wide variety of counseling duties. As previously mentioned, the diversity of services offered by Family Service Centers does not lend itself to specialization. More to the point, marriage and

family counseling require specific skills which may be lacking in some individual counselors. Most FSCs will make an effort to provide adequate marriage/family counseling during the first few sessions with new clients. If the problem is too complex, or if the counselor evaluates the requirements of the individuals involved to be beyond the scope of his or her expertise, referrals are provided to the nearest military medical facility, or to a civilian practitioner.

Quality of counseling service provided by an FSC, then, takes on a much broader definition within the context of this thesis. If quality is viewed simply as the specific ability to treat family dysfunction, FSCs may be found lacking. However, if the definition is expanded to include diagnosis and treatment, the FSC counselor is sufficiently trained and has the resources available to provide "quality" service.

One additional comment regarding staff qualifications: there is presently no requirement that counselors have any training in the recognition or treatment of alcohol or substance abuse. Although individual counselors may have theoretical (classroom) or practical (clinical exposure) experience in dealing with alcohol or substance abuse, a more uniform approach to recognition and intervention training is necessary. At a minimum, FSC counselors should be enrolled in the Navy Alcohol and Drug Safety Action Program (NADSAP) within six months of their initial employment at a Center.

A comparison of Navy Support Services with the support services of similar civilian employers (comparable in size, number of employees and fiscal resources) was difficult to develop. A letter was mailed to the fifty largest industrial or service entities in American business, as defined by the Rand-McNally 1990 Commercial Atlas & Marketing Guide [Ref. 84]. The corporations were asked for information concerning support services they provided to divorced employees, or to employees who were in the process of altering their marital status. Because the comparison dealt with confidential issues of employee counseling, many of the corporations were either unable or reluctant to provide statistical information concerning costs, frequency of service delivery, and the specific nature of the counseling provided. Of the twenty-six corporations that responded, none were able to provide statistical data. Six of them were willing to offer observations based on the experience of the corporate officer answering the letter, and five provided cost figures for either company or employee payment for counseling services. Fifteen of the twenty-six respondents mentioned "Employee Assistance Programs" (EAPs) as the means by which they handled counseling issues, and they provided brochures detailing the services available through their EAPs. Although the information provided from "Corporate America" is incomplete, enough cost figures, usage rates, and benefit availability descriptions were provided to allow a reasonable

comparison between FSCs and EAPs. The results of the comparison are presented in Table XIX.

**TABLE XIX COMPARISON OF FAMILY SERVICE CENTERS WITH
EMPLOYEE ASSISTANCE PROGRAMS**

FACTOR	FSC	EAP
AVERAGE COST TO THE INDIVIDUAL	-0-	\$15
AVAILABILITY OF SERVICE	ON-BASE	OFF-SITE CLINICS
STAFF QUALIFICATIONS	STRINGENT	VARIABLE
LENGTH-OF-TREATMENT OPTION	SOMEWHAT LIMITED	STRICTLY LIMITED

Note: EAP cost estimates are based on five corporate responses to a 10 August 1990 survey.

Source: Naval Military Personnel Command (NMPC-661) and 10 August 1990 corporate survey results.

As shown in Table XIX, if the comparison is based on cost to the individual, availability of service, staff qualifications, or length-of-treatment option, FSCs hold an edge over the civilian Employee Assistance Programs provided by those corporations which responded to the survey.

C. FSC PROSPECTS AND RECOMMENDATIONS

Family Service Centers are significant resources, providing timely, skillful counseling and support to service members and families throughout the world. They are valued by

the people they serve; retention questionnaire responses from 1,787 Navy reenlistees through the third quarter of calendar year 1990 list "quality of Family Service Centers" as the third most significant reason for reenlistment, behind "job security" and "support and recreational services." [Ref. 85] Their prospects for continued service to the Navy are tremendous. The concept of a division within the Navy, staffed by well-qualified, dedicated professionals whose primary function is to pursue initiatives designed to enhance the quality of life of Navy people, is exciting. At this point, the concept is a reality, and it is reasonably effective. However, implementation of the following recommendations will move the program forward.

1. Increase headquarters staff to allow for policy development, resource coordination, on-site assist visits and improved liaison with program managers and sponsors. Headquarters staff should be more concerned with development of a "support continuum", identifying critical points where family service support is most necessary (such as improved communications skills, marriage enrichment programs, and financial counseling), rather than functioning in a reactive mode to short-range problems. Efforts to identify and bracket career transition points, for example, could bring FSC expertise to bear at critical times in the professional and personal lives of the people the Navy would like to retain.

Consider manpower specialists as well as clinical personnel for both FSC duty and headquarters staff.

2. Establish a "clearing house" for family support issues through either an interactive data base (where researchers can communicate with each other via computer) or a periodic publication of current research in progress. The Office of the Assistant Secretary of Defense (Force Management & Personnel) is the logical choice to coordinate such an initiative. Military Family, for example, is an authorized, unofficial newspaper that provides information and reference material to persons involved in family programs, family advocacy matters, and other activities related to military family issues [Ref. 86]. It is published by the Military Family Resource Center, under the auspices of the Office of the Assistant Secretary of Defense, and is a prime example of the type of effort recommended here.

3. Include NADSAP training (at a minimum) for all FSC clinical counseling personnel. Such training should be accomplished within six months of hiring.

4. Add questions concerning family history of divorce, substance/spouse abuse, and financial problems to the annual Navy Personnel Survey to determine trends and target resources. The problem of adequate data upon which to evaluate support programs has been difficult to overcome. The budget climate for the near future will require substantive, quantifiable data to support program funding. Those programs

unable to provide such data will become casualties of cost-cutting wars. There are initiatives underway within OP-15 to deal with the data collection problem, most notably a new and expanded management information system called QUALMIS (Quality of Life Management Information System) designed as a follow-on to the Family Support Program Management Information System (FSPMIS). The addition of historical information to the data base would allow more detailed study of the patterns of divorce over time, and would allow Family Service Centers to identify, in the aggregate, "high-risk" categories of sailors for preventive counseling.

5. Place more emphasis on the preventive nature of FSC services. The Navy Leader Development Program (NAVLEADS) training guides and major personnel training pipelines (for example, Chief Petty Officer indoctrination, Division Officer and Department Head courses, PCO/PXO classes) should stress early detection and referral. The most recent revisions of the NAVLEADS Instructor Guides have specific sections dedicated to counseling resources available outside the command, and the current Command Indoctrination Program instruction (OPNAVINST 5351.1) stresses the appropriate use of Family Service Centers.

V. CONCLUSIONS AND RECOMMENDATIONS FOR FURTHER STUDY

A. CONCLUSIONS

In answer to the two major research questions addressed by this thesis:

- There is a significant difference between the marriage and divorce rates of Navy people, the other services, and the general U.S. population. Navy and military marriage rates are generally lower than overall civilian marriage rates, but two to three times higher among seventeen-to-twenty-year-olds. Divorce rates are lower for military men, but much higher for military women.
- Support services available to Navy people contemplating a divorce are improving. Family Service Centers are significant resources, providing timely, skillful counseling and support to service members and families throughout the world, and they are valued by the people they serve.

B. RECOMMENDATIONS FOR FURTHER STUDY

Where appropriate, recommendations for procedural changes, policy initiatives, and data analysis have been offered throughout this thesis. The purpose of this section is to identify specific points or topic areas which might serve as "jumping-off points" for additional research.

By design, this exploratory thesis took a rather broad view of the relationship among marriage, divorce, and Family Service Centers. The focus of our work tended toward the basic: establishing a usable data base for comparative

analysis; providing an extensive and well-documented review of current literature on the topics of marriage, divorce, and family support; and defining some minimum criteria upon which to base a determination of the effectiveness of Family Service Centers in their efforts to counsel Navy couples in marital distress. Having provided this basic information, it is our contention that follow-on research will be somewhat easier. Whether the subjects are studied in the aggregate, as we have attempted to do, or studied individually, the information contained in this thesis will provide insight, useful data and a solid foundation for further analytical work.

We have begun development of a multivariate model to determine if there is a measurable correlation between a change in marital status and the reenlistment decision. At the point in time when we opted to close out our research, the model had been run, but the results indicated that we had failed to isolate the effects of one or more important variables in the reenlistment decision. Data collection refinements keyed to isolating the effects of self-selection from those attributable to the military life-style would improve the predictive quality of the model. Our preliminary work is being offered as the basis for a follow-on thesis.

Data collection improvements should be addressed by researchers; one of the major difficulties encountered in this thesis was gathering and arranging data in usable form. The idea of standardizing both the specific information to be

gathered and the most efficient collection methods could keep thesis students busy for many months.

One of the unanswered questions raised by policymakers and program managers in the area of family support focuses on the concept of "return on investment." To quote one senior Navy analyst:

The way we look at issues such as those addressed (in your thesis) should be pretty straight-forward; is it a problem? What is the relationship to retention, recruitment, and resourcing? Are the facilities (Family Service Centers) being used adequately? Do we need to resource more?

People resourcing Family Service Centers are asking, "What's the return on investment?" They also question, quite frankly, whether follow-on counseling does any good. [Ref. 87]

Taken out of context, the above quote could be misconstrued as callous or insensitive. However, that could not be farther from the truth. The point to be made is that, when federal dollars are being allocated, questions such as these should be asked, and answers to them must be available in understandable, quantifiable, verifiable form. Further research aimed at addressing any or all of the questions raised would have long-term practical impact on Navy personnel.

The next logical step after conducting a study should be to question the policy implications of the study. For example, as a Navy official has observed:

if dual marriages negatively impact the military, what should be done about it? Can any policy decisions be drawn from the study? Should the military consider

selective discharges during force drawdown, or institute some sort of pre-screening procedure to reduce the number of dual marriages? The measure is performance; if you can quantify performance as a function of multiple marriages, then there are grounds for policy action. [Ref. 88]

The mechanics of data collection provide additional sources of follow-on study. Developing standardized intake forms for all Family Service Centers, drafting documents which can be computer-scanned and stored for aggregate study, working with OP-15 to improve and refine Navy survey questions--these are only three initiatives available to thesis students in the area of data collection.

On a broader scale, a thesis focused on providing a consensus definition for "Quality of Life" would be a tremendous help to researchers throughout the manpower field.

Given our conclusion that FSC services are valuable resources in the fight against family dysfunction, we suggest a study of methods to identify sailors in "high risk" categories, as well as methods to provide preventive counseling to those individuals. The methods include programs currently in use at Family Service Centers, as well as those available from civilian or commercial sources. An example of such a "canned" program is the Prevention and Relationship Enhancement Program, or PREP, developed at the University of Denver. This program offers participants the opportunity to learn effective communication and constructive arguing skills. [Ref. 89] It is currently being studied by the Navy for possible use in

Family Service Centers, and an offer of a "cost/benefit analysis" would likely be welcomed by the understaffed Family Services headquarters.

**APPENDIX A - MARRIAGE RATES FOR MALE AND FEMALE ACTIVE DUTY
ENLISTED FORCES AND THE CIVILIAN POPULATION BY AGE GROUP AND
SERVICE CATEGORY (DoD OR NAVY), 1984**

Table XX 1984 MALE COMPARATIVE MARRIAGE RATES

<u>UNADJUSTED</u>			
<u>AGE GROUP</u>	<u>CIVILIAN</u>	<u>DOD</u>	<u>NAVY</u>
<20	3.1	9.8	9.0
20-25	8.1	9.4	9.4
25-30	11.8	4.5	5.5
30-40	10.5	2.3	2.6
40-50	8.1	1.1	1.3
50-65	4.8	.8	1.3
<u>ADJUSTED</u>			
<20	3.4	10.6	9.6
20-25	12.4	14.5	13.4
25-30	11.9	15.1	14.4
30-40	9.8	16.1	14.4
40-50	9.5	11.9	11.4
50-65	6.3	11.8	16.7

Source: U.S. Bureau of the Census and DoD Defense
Manpower Data Center

Note: Adjusted rates reflect the use of the estimated
military and civilian single population for each age
group in the marriage rate calculation.

NOTE: TABULAR RATES ARE PRESENTED AS INSTANCES PER 100

Table XXI 1984 FEMALE COMPARATIVE MARRIAGE RATES

<u>UNADJUSTED</u>			
<u>AGE GROUP</u>	<u>CIVILIAN</u>	<u>DOD</u>	<u>NAVY</u>
<20	7.4	17.4	17.3
20-25	11.3	11.5	11.5
25-30	12.8	6.5	7.4
30-40	8.5	4.1	4.9
40-50	4.6	3.4	3.7
50-65	1.7	0	0

<u>ADJUSTED</u>			
<20	7.5	19.2	18.8
20-25	11.5	19.0	17.1
25-30	12.9	14.2	12.7
30-40	8.1	8.8	7.8
40-50	5.4	5.8	5.9
50-65	2.7	0	0

Source: U.S. Bureau of the Census and DoD Defense
Manpower Data Center

Note: Adjusted rates reflect the use of the estimated
military and civilian single population for each age
group in the marriage rate calculation.

NOTE: TABULAR RATES ARE PRESENTED AS INSTANCES PER 100

APPENDIX B - ANNUAL DIVORCE RATES (1982-1986) BY GENDER, AGE GROUP AND POPULATION

Table XXII 1982-1986 MALE ANNUAL DIVORCE RATES

<u>AGE</u>	<u>POPULATION</u>	<u>82</u>	<u>83</u>	<u>84</u>	<u>85</u>	<u>86</u>
<20	CIVILIAN	3.49	4.33	4.29	4.00	4.98
	DoD	2.43	2.25	2.26	2.44	2.29
	NAVY	3.02	2.92	2.90	3.59	2.54
20-25	CIVILIAN	4.70	4.52	4.82	4.99	4.99
	DoD	2.59	2.59	2.63	2.76	2.55
	NAVY	3.34	3.40	3.56	3.87	3.05
25-30	CIVILIAN	4.03	4.00	3.76	3.84	3.82
	DoD	2.56	2.47	2.49	2.54	2.31
	NAVY	3.11	3.03	3.19	3.33	2.73
30-40	CIVILIAN	2.97	2.98	2.94	2.83	2.84
	DoD	1.95	1.95	1.91	1.95	1.75
	NAVY	2.19	2.33	2.32	2.36	2.03
40-50	CIVILIAN	1.85	1.87	1.90	1.99	1.98
	DoD	1.13	1.23	1.22	1.24	1.16
	NAVY	1.38	1.48	1.46	1.47	1.37
>50	CIVILIAN	.81	.85	.86	.89	.86
	DoD	.69	.61	.60	.67	.70
	NAVY	.83	.83	.99	.68	.62

Source: U.S. Bureau of the Census and DoD Defense Manpower Data Center

NOTE: TABULAR RATES ARE PRESENTED AS INSTANCES PER 100

Table XXIII 1982-1986 FEMALE ANNUAL DIVORCE RATES

<u>AGE</u>	<u>POPULATION</u>	<u>82</u>	<u>83</u>	<u>84</u>	<u>85</u>	<u>86</u>
<20	CIVILIAN	4.56	4.81	4.55	4.84	5.09
	DoD	7.65	6.42	6.69	6.87	6.15
	NAVY	11.90	10.04	10.24	11.53	6.63
20-25	CIVILIAN	4.45	4.33	4.44	4.68	4.66
	DoD	7.14	7.33	7.07	7.34	6.09
	NAVY	10.07	10.85	11.46	9.88	6.70
25-30	CIVILIAN	3.59	3.57	3.50	3.56	3.51
	DoD	7.12	6.69	6.68	6.57	5.68
	NAVY	9.86	8.70	9.33	9.28	5.74
30-40	CIVILIAN	2.57	2.58	2.58	2.60	2.57
	DoD	6.17	5.73	5.39	4.99	4.65
	NAVY	7.84	6.38	7.95	6.15	4.74
40-50	CIVILIAN	2.36	1.51	1.51	1.61	1.59
	DoD	3.57	3.48	3.87	2.82	2.86
	NAVY	3.41	5.00	5.43	5.48	2.67
>50	CIVILIAN	.54	.57	.59	1.16	.60
	DoD	0.00	0.00	0.00	2.32	6.38
	NAVY	0.00	0.00	0.00	0.00	11.11

Source: DoD Defense Manpower Data Center

NOTE: TABULAR RATES ARE PRESENTED AS INSTANCES PER 100

APPENDIX C - COMPARATIVE MARRIAGE AND DIVORCE RATES FROM
FISCAL YEAR 1977 THROUGH FISCAL YEAR 1988

Table XXIV FISCAL YEAR 1977-1988 MARRIAGE RATES

<u>YEAR</u>	<u>CIVILIAN</u>	<u>ENLISTED DoD</u>	<u>ENLISTED NAVY</u>
FY77	.99	6.5	6.2
FY78	1.03	6.5	6.0
FY79	1.04	6.4	6.1
FY80	1.06	6.9	7.4
FY81	1.06	7.4	7.6
FY82	1.06	7.4	7.4
FY83	1.05	7.3	7.4
FY84	1.05	6.7	7.0
FY85	1.01	7.0	7.6
FY86	1.00	6.8	7.8
FY87	.99	6.8	7.4
FY88	.97	6.5	6.8

Source: U.S. Bureau of the Census and DoD Defense
Manpower Data Center

NOTE: TABULAR RATES ARE PRESENTED AS INSTANCES PER 100

Table XXV FISCAL YEAR 1977-1988 DIVORCE RATES

<u>YEAR</u>	<u>CIVILIAN</u>	<u>ENLISTED DoD</u>	<u>ENLISTED NAVY</u>
FY77	.50	2.5	3.1
FY78	.51	2.5	2.7
FY79	.51	2.5	2.7
FY80	.52	2.6	2.9
FY81	.53	2.8	3.5
FY82	.50	2.8	3.2
FY83	.49	2.8	3.3
FY84	.50	2.7	3.4
FY85	.50	2.8	3.5
FY86	.49	2.8	3.7
FY87	.46	2.6	2.9
FY88	.46	2.6	2.8

Source: U.S. Bureau of the Census and DoD Defense
Manpower Data Center

NOTE: TABULAR RATES ARE PRESENTED AS INSTANCES PER 100

APPENDIX D - ADDITIONAL DIVORCE RATE INFORMATION TABLES

Table XXVI FISCAL YEAR 1977-1988 DIVORCE RATES (DoD vs. NAVY)

<u>SERVICE</u>	<u>77</u>	<u>78</u>	<u>79</u>	<u>80</u>	<u>81</u>	<u>82</u>	<u>83</u>	<u>84</u>	<u>85</u>	<u>86</u>	<u>87</u>	<u>88</u>
DoD	2.3	2.3	2.3	2.4	2.5	2.6	2.5	2.5	2.5	2.6	2.3	2.4
NAVY	2.7	2.5	2.5	2.7	3.1	2.8	3.0	3.1	3.2	3.3	2.6	2.5
Source: DoD Defense Manpower Data Center												

Table XXVII FISCAL YEAR 1977-1988 DIVORCE RATES (DoD vs. NAVY/OFFICER vs. ENLISTED)

	<u>STATUS</u>	<u>77</u>	<u>78</u>	<u>79</u>	<u>80</u>	<u>81</u>	<u>82</u>	<u>83</u>	<u>84</u>	<u>85</u>	<u>86</u>	<u>87</u>	<u>88</u>
DoD	ENLISTED	2.5	2.5	2.5	2.6	2.8	2.9	2.8	2.7	2.8	2.8	2.6	2.6
	OFFICER	1.4	1.4	1.5	1.5	1.6	1.6	1.5	1.5	1.5	1.6	1.4	1.4
NAVY	ENLISTED	3.1	2.8	2.7	3.0	3.5	3.2	3.3	3.4	3.6	3.7	2.9	2.8
	OFFICER	1.1	1.2	1.4	1.3	1.6	1.4	1.6	1.6	1.6	1.6	1.3	1.3
Source: DoD Defense Manpower Data Center													

NOTE: TABULAR RATES ARE PRESENTED AS INSTANCES PER 100

Table XXVIII FISCAL YEAR 1977-1988 DIVORCE RATES OF DoD OFFICER PERSONNEL BY POPULATION GROUP AND GENDER

GENDER	POPULATION GROUP	77	78	79	80	81	82	83	84	85	86	87	88
MALE	WHITE	1.3	1.3	1.4	1.4	1.5	1.5	1.4	1.4	1.3	1.4	1.2	1.3
	BLACK	1.8	1.5	1.7	1.6	1.5	1.8	1.6	1.6	1.8	1.8	1.5	1.5
	HISPANIC	1.6	1.7	1.6	1.8	1.4	1.3	1.3	1.4	1.2	1.2	1.7	1.3
	OTHER	0.9	1.6	1.3	0.8	1.9	1.3	1.5	1.2	1.7	1.2	1.2	0.8
FEMALE	WHITE	5.1	4.3	5.6	5.4	5.2	5.4	4.8	4.7	4.1	4.3	3.8	3.6
	BLACK	0.0	5.8	6.0	4.8	6.1	5.6	6.6	6.0	4.8	4.3	4.4	4.9
	HISPANIC	9.8	2.5	7.0	6.5	1.0	6.5	3.4	5.7	5.3	5.4	3.8	2.9
	OTHER	1.3	3.2	3.0	3.5	6.5	1.6	3.3	3.3	1.5	5.3	1.8	3.2

Source: DoD Defense Manpower Data Center

Table XXIX FISCAL YEAR 1977-1988 DIVORCE RATES OF DoD OFFICER PERSONNEL BY POPULATION GROUP

POPULATION GROUP	77	78	79	80	81	82	83	84	85	86	87	88
WHITE	1.4	1.4	1.4	1.5	1.6	1.6	1.5	1.5	1.4	1.5	1.4	1.4
BLACK	1.8	1.6	1.8	1.7	1.8	2.0	2.0	2.0	2.1	2.0	1.8	1.9
HISPANIC	1.8	1.7	1.8	2.0	1.4	1.6	1.4	1.6	1.5	1.6	1.9	1.5
OTHER	0.9	1.7	1.4	1.1	2.2	1.3	1.6	1.4	1.7	1.6	1.2	1.0

Source: DoD Defense Manpower Data Center

NOTE: TABULAR RATES ARE PRESENTED AS INSTANCES PER 100

**Table XXX FISCAL YEAR 1977-1988 DIVORCE RATES OF DoD
ENLISTED PERSONNEL BY POPULATION GROUP**

POPULATION GROUP	77	78	79	80	81	82	83	84	85	86	87	88
WHITE	2.7	2.7	2.7	2.9	3.0	3.0	3.0	2.9	2.9	3.0	2.7	2.8
BLACK	2.2	2.1	2.4	2.2	2.4	2.5	2.5	2.5	2.5	2.5	2.3	2.4
HISPANIC	2.2	2.1	2.2	2.3	2.1	2.4	2.2	2.3	2.4	2.3	2.1	2.1
OTHER	1.4	1.3	1.4	1.4	1.8	1.7	1.8	1.8	1.9	1.9	1.6	1.7

Source: DoD Defense Manpower Data Center

**Table XXXI FISCAL YEAR 1977-1988 DIVORCE RATES OF DoD
ENLISTED PERSONNEL BY GENDER AND POPULATION GROUP**

GENDER	POPULATION GROUP	77	78	79	80	81	82	83	84	85	86	87	88
MALE	WHITE	2.5	2.5	2.5	2.6	2.7	2.7	2.6	2.6	2.6	2.7	2.5	2.5
	BLACK	2.0	1.9	2.1	2.0	2.1	2.2	2.1	2.1	2.0	2.1	1.9	2.0
	HISPANIC	2.0	1.9	1.9	2.0	2.0	2.1	2.0	2.1	2.1	2.1	1.9	1.9
	OTHER	1.3	1.2	1.3	1.3	1.7	1.5	1.6	1.6	1.6	1.6	1.4	1.5
FEMALE	WHITE	8.0	7.5	7.5	7.5	7.7	7.7	7.8	7.3	7.4	7.4	6.3	6.5
	BLACK	7.0	7.5	7.9	7.5	6.5	6.5	6.4	6.5	6.1	5.9	5.4	5.5
	HISPANIC	6.4	6.1	6.8	6.3	5.3	7.6	6.0	6.8	7.3	6.7	4.8	5.1
	OTHER	5.3	6.2	4.8	5.3	6.3	7.2	6.6	6.3	7.7	6.6	4.7	5.8

Source: DoD Defense Manpower Data Center

NOTE: TABULAR RATES ARE PRESENTED AS INSTANCES PER 100

Table XXXII FISCAL YEAR 1977-1988 DIVORCE RATES OF NAVY OFFICER PERSONNEL BY POPULATION GROUP

POPULATION GROUP	77	78	79	80	81	82	83	84	85	86	87	88
WHITE	1.1	1.2	1.4	1.3	1.6	1.4	1.6	1.6	1.5	1.6	1.3	1.3
BLACK	1.2	1.1	2.0	1.9	2.1	1.3	1.8	2.4	2.7	1.9	1.4	2.1
HISPANIC	2.1	1.7	1.7	1.7	1.8	2.5	1.1	1.8	2.6	3.1	1.5	1.6
OTHER	0.4	1.8	1.3	0.4	3.2	1.2	2.0	1.2	1.5	1.8	1.6	0.9

Source: DoD Defense Manpower Data Center

Table XXXIII FISCAL YEAR 1977-1988 DIVORCE RATES OF NAVY OFFICER PERSONNEL BY GENDER AND POPULATION GROUP

GENDER	POPULATION GROUP	77	78	79	80	81	82	83	84	85	86	87	88
MALE	WHITE	1.1	1.2	1.3	1.3	1.4	1.3	1.4	1.5	1.4	1.4	1.1	1.2
	BLACK	1.2	1.2	1.4	1.1	2.0	0.8	1.5	1.8	2.1	1.6	1.1	2.0
	HISPANIC	1.6	1.4	1.5	1.5	1.8	1.6	0.9	1.3	1.6	2.8	1.3	1.5
	OTHER	0.4	2.0	1.1	0.2	2.9	1.2	1.8	0.9	1.6	1.7	1.3	0.7
FEMALE	WHITE	3.8	3.9	5.8	4.4	5.6	5.3	5.6	4.9	4.8	3.7	3.3	2.9
	BLACK	0.0	0.0	17	20	5.7	7.5	6.4	10	8.5	4.3	3.6	3.2
	HISPANIC	18	13	8.0	6.9	0.0	30	7.1	9.0	19	8.0	4.7	2.2
	OTHER	0.0	0.0	2.6	2.3	7.1	0.0	5.9	5.6	0.0	2.4	5.9	3.6

Source: DoD Defense Manpower Data Center

NOTE: TABULAR RATES ARE PRESENTED AS INSTANCES PER 100

Table XXXIV FISCAL YEAR 1977-1988 DIVORCE RATES OF NAVY ENLISTED PERSONNEL BY POPULATION GROUP

POPULATION GROUP	77	78	79	80	81	82	83	84	85	86	87	88
WHITE	3.3	3.0	3.0	3.2	3.8	3.5	3.6	3.7	3.8	3.9	3.1	3.0
BLACK	3.2	2.4	3.0	2.6	3.6	3.1	3.1	3.3	3.4	3.6	2.8	2.6
HISPANIC	3.3	2.6	2.5	2.7	2.6	3.1	3.0	3.3	3.3	3.8	2.7	2.5
OTHER	1.1	0.9	1.0	1.2	1.3	1.2	1.5	1.4	1.6	1.5	1.3	1.1

Source: DoD Defense Manpower Data Center

Table XXXV FISCAL YEAR 1977-1988 DIVORCE RATES OF NAVY ENLISTED PERSONNEL BY GENDER AND POPULATION GROUP

GENDER	POPULATION GROUP	77	78	79	80	81	82	83	84	85	86	87	88
MALE	WHITE	3.1	2.8	2.8	3.1	3.4	3.1	3.2	3.3	3.4	3.5	2.9	2.8
	BLACK	3.1	2.2	2.7	2.2	3.2	2.6	2.6	2.8	2.8	3.1	2.5	2.2
	HISPANIC	2.9	2.4	2.3	2.5	2.4	2.8	2.7	3.0	2.8	3.1	2.5	2.3
	OTHER	1.0	0.8	0.9	1.1	1.2	1.1	1.5	1.3	1.4	1.4	1.2	1.1
FEMALE	WHITE	12	10	9.3	10	13	10	11	10	11	10	6.6	6.3
	BLACK	4.5	11	14	12	11	11	10	10	10	10	5.9	5.5
	HISPANIC	17	9.9	8.2	9.2	9.9	11	8.5	9.5	12	13	5.8	5.3
	OTHER	7.5	11	11	9.9	11	7.8	9.3	7.8	12	8.6	5.7	3.9

Source: DoD Defense Manpower Data Center

NOTE: TABULAR RATES ARE PRESENTED AS INSTANCES PER 100

**Table XXXVI FISCAL YEAR 1977-1988 DIVORCE RATES OF NAVY
ENLISTED MEN BY POPULATION AND AGE GROUP**

POPULATION GROUP	AGE GROUP	77	78	79	80	81	82	83	84	85	86	87	88
WHITE	<18	1.9	1.9	1.1	3.4	2.1	2.4	6.6	6.8	3.8	2.3	1.9	0.0
	18-20	3.0	3.0	2.6	2.9	3.6	3.2	3.0	3.1	3.1	3.8	2.7	3.1
	21-25	3.7	3.5	3.3	3.8	4.3	3.6	3.6	3.7	3.9	4.2	3.4	3.3
	26-30	3.6	3.1	3.1	3.4	4.0	3.4	3.6	3.6	3.8	3.8	3.2	3.0
	31-40	2.5	2.2	2.5	2.6	2.7	2.7	2.8	2.8	2.8	2.9	2.5	2.4
	41-50	1.4	1.5	1.4	1.4	1.7	1.9	2.0	1.9	2.1	1.8	1.9	1.8
	>50	1.3	0.7	0.8	0.8	1.4	2.1	1.1	1.4	1.1	1.2	0.3	1.2
BLACK	<18	0.0	0.0	0.0	0.0	0.0	0.0	7.7	0.0	0.0	0.0	7.7	0.0
	18-20	2.1	1.9	2.5	2.3	2.6	2.8	2.9	1.9	1.7	2.3	1.8	1.3
	21-25	4.0	2.2	2.6	2.2	3.6	2.2	2.5	2.9	2.7	3.0	2.2	2.3
	26-30	3.5	3.0	3.1	3.0	3.4	3.1	3.1	2.7	2.7	3.3	2.6	2.4
	31-40	2.0	1.4	2.9	1.6	2.7	2.5	2.4	2.9	3.4	3.2	2.9	2.2
	41-50	2.2	2.6	1.6	1.4	2.7	1.9	1.3	2.6	1.3	1.4	2.6	1.0
	>50	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	6.7	8.3	5.3	0.0
HISPANIC	<18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0
	18-20	2.9	1.7	1.3	1.9	1.4	1.8	3.0	1.6	2.8	4.0	2.7	1.0
	21-25	3.0	2.8	2.3	2.4	2.8	3.5	3.1	2.7	3.1	3.8	2.9	2.3
	26-30	3.3	2.4	2.3	2.7	2.9	3.3	2.5	3.5	3.2	3.2	1.9	2.4
	31-40	2.5	2.1	2.7	2.7	1.6	1.7	2.4	3.7	1.9	2.4	2.6	2.6
	41-50	3.0	1.0	1.2	1.1	1.4	0.0	1.7	1.1	2.0	0.5	1.4	0.9
	>50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER	<18	0.0	0.0	0.0	3.3	0.0	0.0	0.0	2.5	0.0	0.0	0.0	0.0
	18-20	2.3	1.5	2.7	1.3	1.4	1.1	2.0	4.1	2.6	2.8	2.1	2.0
	21-25	1.8	1.4	1.6	2.0	2.2	1.6	3.1	2.2	3.3	2.2	1.7	1.3
	26-30	1.0	1.0	1.3	1.3	1.6	1.2	2.1	1.5	2.1	1.9	1.7	1.4
	31-40	0.9	0.7	0.6	1.0	1.0	1.2	1.1	1.2	1.2	1.2	1.2	1.1
	41-50	0.6	0.4	0.5	0.4	0.9	0.3	0.6	0.6	0.6	0.9	0.7	0.4
	>50	0.0	0.0	0.0	0.0	0.0	0.0	1.9	4.3	0.0	0.0	0.0	0.0

Source: DoD Defense Manpower Data Center

NOTE: TABULAR RATES ARE PRESENTED AS INSTANCES PER 100

**Table XXXVII FISCAL YEAR 1977-1988 DIVORCE RATES OF NAVY
ENLISTED WOMEN BY POPULATION AND AGE GROUP**

POPULATION GROUP	AGE GROUP	77	78	79	80	81	82	83	84	85	86	87	88
WHITE	<18	6.9	0.0	0.0	0.0	0.0	0.0	33	0.0	0.0	0.0	0.0	0.0
	18-20	7.5	9.3	8.1	12	12	9.8	12	9.7	11	12	7.1	6.5
	21-25	7.7	11	8.3	9.9	13	11	10	11	12	10	7.0	6.6
	26-30	9.2	9.7	12	9.9	13	11	11	9.1	10	10	6.7	6.3
	31-40	11	9.3	15	11	13	10	9.7	8.7	10	7.5	5.1	5.7
	41-50	3.2	0.0	0.0	0.0	7.1	0.0	9.5	7.7	11	12	3.7	2.4
	>50	40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33	0.0
BLACK	<18	0.0	0.0	0.0	0.0	99	0.0	50	0.0	0.0	0.0	0.0	0.0
	18-20	7.0	13	18	11	7.6	11	9.0	15	9.4	8.8	5.0	3.5
	21-25	7.6	9.4	15	14	12	11	9.2	9.6	11	10	6.1	6.1
	26-30	5.4	19	10	8.1	11	11	13	11	10	9.2	5.3	4.5
	31-40	7.7	0.0	0.0	17	13	5.7	11	7.2	6.7	9.7	7.3	6.1
	41-50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18
	>50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HISPANIC	<18	4.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	18-20	5.7	14	10	5.7	0.0	4.0	6.3	5.9	9.3	18	8.7	2.8
	21-25	6.0	9.5	6.7	11	12	8.4	8.2	10	14	9.4	6.0	6.4
	26-30	8.1	7.8	11	8.3	5.9	16	11	13	9.0	16	4.8	5.4
	31-40	8.3	20	7.1	6.7	29	18	5.3	0.0	12	14	4.8	3.2
	41-50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	>50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER	<18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	18-20	2.7	19	0.0	9.1	17	7.1	14	7.1	0.0	0.0	0.0	0.0
	21-25	6.4	11	15	7.4	13	8.5	11	9.2	11	8.2	6.0	6.1
	26-30	3.9	7.1	5.6	19	11	6.8	7.6	5.9	11	13	3.1	4.5
	31-40	11	0.0	11	0.0	0.0	8.3	6.7	8.3	19	3.3	8.9	1.8
	41-50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	>50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Source: DoD Defense Manpower Data Center

NOTE: TABULAR RATES ARE PRESENTED AS INSTANCES PER 100

**Table XXXVIII FISCAL YEAR 1977-1988 DIVORCE RATES OF NAVY
MALE OFFICERS**

POPULATION GROUP	AGE GROUP	77	78	79	80	81	82	83	84	85	86	87	88
WHITE	<18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	18-20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	21-25	1.3	1.4	1.5	1.3	1.3	1.1	1.0	1.4	1.1	1.0	1.2	1.2
	26-30	1.4	1.4	1.8	1.5	2.1	1.7	2.1	1.4	1.6	1.7	1.3	1.3
	31-40	1.0	1.2	1.3	1.3	1.4	1.3	1.3	1.6	1.5	1.4	1.1	1.2
	41-50	0.5	0.7	0.9	0.9	0.9	1.0	1.0	1.3	1.1	1.4	1.0	1.0
	>50	0.8	1.4	0.6	0.4	0.1	0.8	0.7	0.4	0.7	0.4	0.6	0.9
BLACK	<18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	18-20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	21-25	0.0	1.8	0.0	0.0	4.0	0.0	4.2	2.8	1.6	4.1	1.3	0.0
	26-30	0.9	1.8	1.0	0.0	2.7	1.5	1.7	1.8	2.4	1.5	1.8	2.1
	31-40	1.7	1.1	1.5	1.4	1.6	0.6	1.2	1.6	2.1	1.7	0.8	2.3
	41-50	1.5	0.0	2.6	1.3	0.0	0.9	0.7	2.1	1.3	0.5	1.0	0.5
	>50	0.0	0.0	0.0	14	0.0	0.0	0.0	0.0	13	0.0	0.0	13
HISPANIC	<18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	18-20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	21-25	1.2	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	5.7	0.0	1.5
	26-30	2.4	1.7	1.2	2.7	1.6	3.2	2.9	2.6	1.9	4.0	0.0	2.1
	31-40	1.0	1.6	2.0	1.7	2.7	1.8	0.0	1.7	1.6	2.0	2.2	1.4
	41-50	1.5	1.3	1.1	0.0	0.0	0.0	1.4	0.0	2.4	1.3	2.2	0.9
	>50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER	<18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	18-20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	21-25	0.0	6.3	4.5	0.0	13	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	26-30	1.4	1.4	1.7	0.0	8.6	1.3	4.6	0.9	2.7	1.8	2.4	1.6
	31-40	0.0	2.5	0.5	0.0	2.2	1.2	1.1	1.1	1.1	1.8	1.1	0.5
	41-50	0.0	0.0	1.3	1.0	0.0	1.6	1.5	0.8	1.5	2.0	0.6	0.5
	>50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.9	0.0	5.3	0.0

Source: DoD Defense Manpower Data Center

NOTE: TABULAR RATES ARE PRESENTED AS INSTANCES PER 100

**Table XXXIX FISCAL YEAR 1977-1988 DIVORCE RATES OF NAVY
FEMALE OFFICERS BY POPULATION AND AGE GROUP**

POPULATION GROUP	AGE GROUP	77	78	79	80	81	82	83	84	85	86	87	88
WHITE	<18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	18-20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	21-25	3.4	4.1	6.6	4.7	5.5	4.0	6.5	5.4	4.6	3.8	5.3	3.0
	26-30	4.7	4.6	5.6	4.4	6.9	5.4	6.0	5.9	5.3	4.1	3.0	3.1
	31-40	3.5	3.0	6.5	5.2	3.8	5.6	5.1	3.7	4.5	3.5	3.4	2.9
	41-50	0.0	0.0	0.0	0.0	0.0	4.3	1.9	3.4	4.0	2.5	1.9	0.8
	>50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BLACK	<18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	18-20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	21-25	0.0	0.0	0.0	67	0.0	0.0	13	17	10	0.0	0.0	0.0
	26-30	0.0	0.0	22	17	6.3	7.3	6.7	10	8.7	6.5	6.0	1.9
	31-40	0.0	0.0	50	0.0	9.1	10	4.3	6.7	8.2	1.9	2.6	4.2
	41-50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33	0.0	50	0.0	0.0
	>50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HISPANIC	<18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	18-20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	21-25	17	11	29	0.0	0.0	33	33	0.0	14	0.0	0.0	0.0
	26-30	20	11	0.0	12	0.0	25	0.0	17	67	17	6.7	5.0
	31-40	20	20	0.0	0.0	0.0	50	0.0	10	14	7.7	5.0	0.0
	41-50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	>50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER	<18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	18-20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	21-25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25	0.0	0.0	0.0	0.0
	26-30	0.0	0.0	14	0.0	17	0.0	0.0	0.0	0.0	0.0	0.0	6.3
	31-40	0.0	0.0	0.0	5.0	6.7	0.0	14	6.3	0.0	4.5	8.3	4.3
	41-50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.1	0.0
	>50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Source: DoD Defense Manpower Data Center

NOTE: TABULAR RATES ARE PRESENTED AS INSTANCES PER 100

APPENDIX E - ADDITIONAL MARRIAGE RATE INFORMATION TABLES

Table XL FISCAL YEAR 1977-1988 MARRIAGE RATES (DoD vs. NAVY)

SERVICE	77	78	79	80	81	82	83	84	85	86	87	88
DoD	7.6	6.1	6.0	6.0	6.5	6.8	6.9	6.8	6.3	6.7	6.5	6.5
NAVY	12	5.9	5.8	5.8	7.2	7.2	7.1	7.1	6.7	7.5	7.4	7.0

Source: DoD Defense Manpower Data Center

Table XLI FISCAL YEAR 1977-1988 MARRIAGE RATES BY SERVICE AND RANK

SERVICE	RANK	77	78	79	80	81	82	83	84	85	86	87	88
DoD	ENLISTED	8.3	6.5	6.5	6.4	6.9	7.4	7.4	7.3	6.7	7.1	6.8	6.8
	OFFICER	3.9	3.5	3.5	3.6	3.8	3.8	3.9	4.1	4.0	4.7	4.3	4.4
NAVY	ENLISTED	13	6.2	6.0	6.1	7.5	4.7	7.4	7.4	7.0	7.6	4.8	7.4
	OFFICER	5.0	4.1	4.7	4.2	5.5	7.6	4.9	4.6	4.5	6.6	4.6	4.8

Source: DoD Defense Manpower Data Center

NOTE: TABULAR RATES ARE PRESENTED AS INSTANCES PER 100

Table XLII FISCAL YEAR 1977-1988 MARRIAGE RATES OF DoD OFFICER PERSONNEL BY GENDER AND POPULATION GROUP

<u>GENDER</u>	<u>POPULATION GROUP</u>	<u>77</u>	<u>78</u>	<u>79</u>	<u>80</u>	<u>81</u>	<u>82</u>	<u>83</u>	<u>84</u>	<u>85</u>	<u>86</u>	<u>87</u>	<u>88</u>
<u>MALE</u>													
	WHITE	3.7	3.2	3.2	3.3	3.7	3.6	3.7	6.2	3.8	4.4	4.1	4.1
	BLACK	4.0	3.8	3.5	4.1	4.5	4.7	4.6	7.3	4.4	5.1	4.9	5.1
	HISPANIC	4.6	4.3	4.6	4.6	3.7	3.5	3.2	6.6	3.9	4.5	4.4	4.7
	OTHER	5.2	4.4	4.4	4.4	4.1	3.3	3.5	4.9	3.2	4.5	4.3	4.5
<u>FEMALE</u>													
	WHITE	7.3	7.2	6.7	6.6	6.6	5.7	5.7	11	6.6	6.9	6.2	6.5
	BLACK	6.1	5.8	5.5	8.0	5.6	4.4	4.4	9.3	6.0	6.3	6.1	5.9
	HISPANIC	5.7	5.2	6.1	5.3	7.3	4.2	5.4	10	6.3	6.8	6.4	7.9
	OTHER	2.9	7.2	5.7	5.2	5.2	5.3	5.5	8.8	5.6	6.3	7.2	5.3

Source: DoD Defense Manpower Data Center

Table XLIII FISCAL YEAR 1977-1988 MARRIAGE RATES OF DOD OFFICER PERSONNEL BY POPULATION GROUP

<u>POPULATION GROUP</u>	<u>77</u>	<u>78</u>	<u>79</u>	<u>80</u>	<u>81</u>	<u>82</u>	<u>83</u>	<u>84</u>	<u>85</u>	<u>86</u>	<u>87</u>	<u>88</u>
WHITE	3.9	3.4	3.4	3.5	3.9	3.7	3.8	6.6	4.0	6.7	4.3	4.4
BLACK	4.1	3.9	3.6	4.4	4.7	4.7	4.6	7.6	4.7	5.3	5.1	5.2
HISPANIC	4.7	4.4	4.7	4.7	4.0	3.6	3.5	6.9	4.2	4.8	4.6	5.1
OTHER	5.0	4.7	4.6	4.5	4.2	3.6	3.7	5.2	3.5	4.8	4.7	4.6

Source: DoD Defense Manpower Data Center

NOTE: TABULAR RATES ARE PRESENTED AS INSTANCES PER 100

**Table XLIV FISCAL YEAR 1977-1988 MARRIAGE RATES OF DOD
ENLISTED PERSONNEL BY POPULATION GROUP**

POPULATION GROUP	77	78	79	80	81	82	83	84	85	86	87	88
WHITE	8.3	6.4	6.3	6.3	6.9	7.2	7.3	7.2	6.8	7.1	6.9	6.9
BLACK	8.0	7.0	7.0	6.7	7.0	7.8	8.0	7.7	6.8	7.1	6.9	6.9
HISPANIC	7.5	6.8	6.8	6.7	7.2	7.9	7.5	7.1	6.5	6.5	6.5	6.5
OTHER	13	6.9	7.0	6.5	5.7	5.7	5.4	5.3	4.8	5.3	5.3	5.2

Source: DoD Defense Manpower Data Center

**Table XLV FISCAL YEAR 1977-1988 MARRIAGE RATES OF DOD
ENLISTED PERSONNEL BY GENDER AND POPULATION GROUP**

GENDER	POPULATION GROUP	77	78	79	80	81	82	83	84	85	86	87	88
<u>MALE</u>	WHITE	8.0	6.0	5.8	5.8	6.4	6.8	6.9	6.8	6.4	6.8	6.5	6.6
	BLACK	7.8	6.7	6.8	6.4	6.7	7.5	7.7	7.4	6.6	6.9	6.7	6.8
	HISPANIC	7.3	6.5	6.6	6.4	6.9	7.5	7.2	6.8	6.2	6.2	6.2	6.2
	OTHER	13	6.7	6.7	6.2	5.5	5.4	5.0	5.0	4.5	5.0	5.0	4.8
<u>FEMALE</u>	WHITE	14	14	14	13	13	13	12	12	11	11	11	10
	BLACK	13	14	12	11	9.6	10	10	9.6	8.5	8.6	8.1	7.8
	HISPANIC	9.9	10	10	9.5	12	11	12	10	11	10	9.9	9.8
	OTHER	15	13	13	12	10	11	12	9.6	8.8	8.8	8.9	9.4

Source: DoD Defense Manpower Data Center

NOTE: TABULAR RATES ARE PRESENTED AS INSTANCES PER 100

Table XLVI FISCAL YEAR 1977-1988 MARRIAGE RATES OF NAVY OFFICER PERSONNEL BY POPULATION GROUP

POPULATION GROUP	77	78	79	80	81	82	83	84	85	86	87	88
WHITE	4.9	4.1	4.6	4.1	5.5	4.7	4.9	4.6	4.5	6.6	4.6	4.8
BLACK	6.7	3.7	4.9	5.4	6.5	5.6	6.2	5.2	4.9	7.7	5.6	6.0
HISPANIC	8.1	6.2	6.9	5.6	4.3	5.9	4.9	5.5	6.1	8.3	6.5	6.4
OTHER	7.7	5.9	6.9	3.8	5.3	5.4	4.5	4.2	3.1	6.5	5.0	4.5

Source: DoD Defense Manpower Data Center

Table XLVII FISCAL YEAR 1977-1988 MARRIAGE RATES OF NAVY OFFICER PERSONNEL BY GENDER AND POPULATION GROUP

GENDER	POPULATION GROUP	77	78	79	80	81	82	83	84	85	86	87	88
<u>MALE</u>	WHITE	4.9	3.9	4.3	3.8	5.2	4.5	4.6	4.4	4.3	6.3	4.5	4.7
	BLACK	6.5	3.7	5.2	5.1	6.3	5.6	5.8	4.8	5.1	7.4	5.6	6.3
	HISPANIC	8.3	6.7	7.2	5.7	3.7	5.4	3.8	4.9	5.9	8.1	6.4	6.3
	OTHER	8.5	4.9	6.6	3.5	5.2	3.4	4.4	4.0	3.3	6.6	4.6	4.4
<u>FEMALE</u>	WHITE	6.2	6.6	9.1	8.5	8.9	6.8	7.3	6.6	6.5	9.3	5.6	5.6
	BLACK	10	4.3	1.9	8.1	7.9	5.3	8.2	7.2	4.2	8.5	5.7	4.9
	HISPANIC	6.3	3.1	4.9	5.4	8.9	11	13	9.7	8.2	10	7.4	7.4
	OTHER	3.3	11	8.3	5.6	6.3	5.4	4.9	6.0	0.9	6.0	8.3	5.3

Source: DoD Defense Manpower Data Center

NOTE: TABULAR RATES ARE PRESENTED AS INSTANCES PER 100

**Table XLVIII FISCAL YEAR 1977-1988 MARRIAGE RATES OF NAVY
ENLISTED PERSONNEL BY POPULATION GROUP**

<u>POPULATION GROUP</u>	<u>77</u>	<u>78</u>	<u>79</u>	<u>80</u>	<u>81</u>	<u>82</u>	<u>83</u>	<u>84</u>	<u>85</u>	<u>86</u>	<u>87</u>	<u>88</u>
WHITE	12	6.1	5.9	6.1	7.6	7.6	7.5	7.5	7.1	7.6	7.8	7.3
BLACK	12	6.7	6.8	6.6	7.3	8.3	8.0	8.1	9.6	8.1	8.4	8.3
HISPANIC	12	6.9	6.2	6.5	8.7	8.5	8.6	8.2	8.1	8.6	9.0	8.5
OTHER	17	6.1	6.0	5.1	3.7	5.1	4.6	4.6	4.4	5.1	5.3	5.3

Source: DoD Defense Manpower Data Center

**Table XLIX FISCAL YEAR 1977-1988 MARRIAGE RATES OF NAVY
ENLISTED PERSONNEL BY GENDER AND POPULATION GROUP**

<u>GENDER</u>	<u>POPULATION GROUP</u>	<u>77</u>	<u>78</u>	<u>79</u>	<u>80</u>	<u>81</u>	<u>82</u>	<u>83</u>	<u>84</u>	<u>85</u>	<u>86</u>	<u>87</u>	<u>88</u>
<u>MALE</u>													
	WHITE	12	5.9	5.6	5.8	7.0	7.2	7.0	7.1	6.7	7.2	7.4	7.0
	BLACK	12	6.7	6.6	6.2	7.2	8.2	7.9	8.0	7.6	8.0	8.3	8.3
	HISPANIC	12	6.8	6.2	6.4	8.4	8.2	8.4	7.9	7.7	8.2	8.5	8.1
	OTHER	17	6.0	5.9	5.0	5.6	5.0	4.4	4.4	4.3	4.9	5.1	5.1
<u>FEMALE</u>													
	WHITE	14	12	12	12	15	13	12	12	11	12	12	10
	BLACK	10	10	11	14	9.1	10	8.5	8.3	8.0	8.9	9.2	8.3
	HISPANIC	7.9	8.2	7.4	7.3	13	13	12	12	12	12	13	11
	OTHER	16	13	12	10	13	12	13	11	9.3	9.6	10	10

Source: DoD Defense Manpower Data Center

NOTE: TABULAR RATES ARE PRESENTED AS INSTANCES PER 100

**Table L FISCAL YEAR 1977-1988 MARRIAGE RATES OF NAVY
ENLISTED MEN BY POPULATION AND AGE GROUP**

POPULATION GROUP	AGE GROUP	77	78	79	80	81	82	83	84	85	86	87	88
WHITE	<18	6.6	5.4	5.5	4.2	5.3	6.3	7.0	6.1	5.5	6.3	6.5	6.5
	18-20	8.7	7.8	7.1	7.1	8.8	8.8	9.1	9.1	9.0	9.3	9.5	9.5
	21-25	8.8	7.3	7.3	7.7	9.5	9.6	9.1	9.2	8.6	9.7	9.9	9.5
	26-30	12	3.9	4.0	4.3	5.2	5.5	5.3	5.3	5.0	5.6	5.9	5.5
	31-40	24	2.2	2.2	2.2	2.6	2.7	2.7	2.8	2.8	2.9	3.1	2.8
	41-50	23	1.5	1.4	1.1	1.6	1.8	1.9	1.6	1.8	1.6	1.8	1.8
	>50	13	1.5	0.7	2.2	2.3	1.8	1.2	1.5	0.3	1.4	1.9	1.1
BLACK	<18	7.1	6.3	7.7	5.5	2.8	4.2	5.9	3.3	2.2	4.0	3.8	3.9
	18-20	8.9	8.8	8.1	7.0	6.9	8.0	8.2	8.7	8.6	9.3	9.0	9.4
	21-25	9.2	6.9	7.4	7.6	9.8	11	10	11	9.9	11	11	11
	26-30	12	3.7	5.4	5.1	5.6	6.0	5.8	5.9	5.4	5.8	6.4	6.0
	31-40	26	2.8	1.9	2.0	2.3	8.2	3.2	3.2	3.6	3.5	4.0	3.3
	41-50	23	1.5	0.7	0.6	1.4	1.1	1.4	0.7	2.4	2.5	1.1	2.0
	>50	0.0	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HISPANIC	<18	4.6	1.9	2.9	3.3	11	5.0	6.9	8.2	7.1	10	3.6	5.2
	18-20	8.3	7.3	6.3	5.9	10	9.9	9.7	9.9	10	11	10	11
	21-25	11	8.9	8.2	8.9	10	9.9	11	9.7	9.0	10	11	9.9
	26-30	12	5.4	5.0	5.0	6.1	5.7	5.3	5.5	5.3	5.7	5.9	5.4
	31-40	23	2.5	2.2	2.6	2.1	2.7	2.9	1.9	3.4	2.5	3.2	3.4
	41-50	23	1.5	0.5	1.3	3.1	0.6	0.5	2.4	1.4	0.9	1.7	1.3
	>50	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER	<18	9.0	6.5	5.3	1.4	2.8	9.5	4.0	4.2	0.0	1.9	2.3	11
	18-20	8.3	8.1	8.2	7.8	8.2	8.2	8.6	7.6	8.7	8.7	7.0	8.5
	21-25	16	13	12	11	14	13	12	12	11	12	13	12
	26-30	11	6.6	7.4	6.4	7.5	8.8	5.5	6.4	6.4	8.5	8.6	7.7
	31-40	22	1.5	1.5	1.3	1.7	1.9	1.7	1.8	1.8	2.0	1.8	2.2
	41-50	29	0.9	0.7	0.9	0.8	0.8	0.3	0.6	0.9	0.8	0.7	0.5
	>50	7.1	0.0	0.0	0.0	3.4	2.4	0.0	0.0	2.5	0.0	0.0	0.0

Source: DoD Defense Manpower Data Center

NOTE: TABULAR RATES ARE PRESENTED AS INSTANCES PER 100

**Table LI FISCAL YEAR 1977-1988 MARRIAGE RATES OF NAVY
ENLISTED WOMEN BY POPULATION AND AGE GROUP**

POPULATION GROUP	AGE GROUP	77	78	79	80	81	82	83	84	85	86	87	88
WHITE	<18	16	18	15	12	19	13	11	14	9.7	11	15	10
	18-20	18	17	16	15	19	16	17	19	17	17	18	18
	21-25	13	12	11	12	14	13	12	12	12	12	12	11
	26-30	8.1	6.9	8.2	7.4	8.6	8.2	7.6	7.7	7.4	8.6	9.6	7.4
	31-40	5.3	5.4	3.7	4.4	6.0	6.3	5.3	5.3	5.2	5.9	7.3	5.3
	41-50	0.0	0.0	0.0	3.8	1.7	1.4	3.7	4.3	1.6	6.8	5.0	3.6
	>50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BLACK	<18	0.0	0.0	0.0	20	3.6	3.1	3.8	0.0	0.0	11	0.0	2.9
	18-20	10	16	19	18	10	11	11	12	9.3	10	12	11
	21-25	12	9.2	11	13	10	10	9.4	8.3	8.8	9.7	9.5	9.3
	26-30	3.0	3.9	1.4	8.0	6.0	7.2	5.5	6.5	6.3	6.9	8.1	6.8
	31-40	0.0	5.6	14	5.6	4.0	3.9	2.6	3.4	4.7	6.6	5.7	4.2
	41-50	0.0	0.0	0.0	0.0	0.0	0.0	17	0.0	0.0	0.0	0.0	0.0
	>50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HISPANIC	<18	0.0	18	5.5	6.7	13	14	0.0	0.0	50	0.0	13	0.0
	18-20	10	10	9.0	9.1	14	15	16	20	16	16	17	15
	21-25	7.6	8.7	7.0	7.7	14	13	11	11	13	12	14	12
	26-30	6.0	4.5	6.0	4.6	10	9.4	8.0	5.3	6.3	7.1	8.2	6.8
	31-40	2.2	0.0	9.2	0.9	4.5	13	3.6	3.0	3.9	8.3	9.2	4.9
	41-50	50	0.0	0.0	0.0	0.0	0.0	33	0.0	0.0	0.0	14	0.0
	>50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER	<18	0.0	50	11	0.0	17	14	0.0	0.0	33	0.0	0.0	0.0
	18-20	25	13	14	13	16	18	17	18	13	13	15	11
	21-25	11	14	13	11	13	15	16	12	11	11	11	14
	26-30	17	9.1	10	3.1	12	2.8	8.6	10	8.4	8.0	9.6	7.1
	31-40	0.0	0.0	5.5	5.0	4.9	6.3	6.2	3.4	4.4	7.4	8.1	7.8
	41-50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13
	>50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Source: DoD Defense Manpower Data Center

NOTE: TABULAR RATES ARE PRESENTED AS INSTANCES PER 100

Table LII FISCAL YEAR 1977-1988 MARRIAGE RATES OF NAVY MALE OFFICERS BY POPULATION AND AGE GROUP

POPULATION GROUP	AGE GROUP	77	78	79	80	81	82	83	84	85	86	87	88
WHITE	<18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	18-20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	21-25	11	9.6	11	9.0	11	10	11	10	9.4	12	9.6	11
	26-30	6.1	5.4	5.5	5.4	7.7	6.6	6.9	6.6	6.2	8.6	6.7	7.0
	31-40	3.0	1.6	2.0	1.8	2.7	2.1	2.2	2.1	2.4	4.2	2.4	2.3
	41-50	0.9	0.5	0.7	0.6	0.9	1.0	0.9	1.2	1.1	2.1	0.9	0.9
	>50	1.3	0.7	1.2	1.1	1.3	0.9	0.2	0.6	0.8	0.8	0.4	0.0
BLACK	<18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	18-20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	21-25	15	8.8	13	8.7	12	11	11	12	12	13	12	14
	26-30	4.7	2.8	5.1	8.7	6.5	6.1	8.2	6.3	6.8	10	9.7	8.6
	31-40	5.4	2.8	3.5	2.1	3.9	3.6	2.5	2.2	1.8	4.8	1.8	3.7
	41-50	1.5	0.0	0.0	3.5	0.9	0.8	3.4	0.0	3.5	1.0	0.9	0.9
	>50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10	0.0	0.0
HISPANIC	<18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	18-20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	21-25	14	12	13	11	15	10	10	9.5	9.3	16	8.3	10
	26-30	6.1	5.7	7.0	5.2	7.1	8.2	4.2	3.3	5.9	6.4	8.5	8.4
	31-40	7.3	4.1	3.6	2.8	0.0	2.7	1.5	4.4	4.3	5.3	4.2	3.4
	41-50	5.2	2.4	0.0	0.9	0.0	3.4	1.3	1.2	1.1	2.2	2.0	0.9
	>50	0.0	25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER	<18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	18-20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	21-25	9.5	6.9	13	4.6	10	7.9	10	8.7	6.5	9.1	7.4	7.4
	26-30	5.7	7.7	8.4	10	11	12	4.1	5.8	4.7	9.9	6.2	8.2
	31-40	11	3.7	3.7	1.6	3.4	3.5	3.7	23	1.9	5.1	3.4	2.1
	41-50	5.3	1.6	5.4	0.0	0.0	0.7	1.3	0.0	0.6	2.3	2.1	1.0
	>50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	10	0.0	0.0

Source: DoD Defense Manpower Data Center

NOTE: TABULAR RATES ARE PRESENTED AS INSTANCES PER 100

**Table LIII FISCAL YEAR 1977-1988 MARRIAGE RATES OF NAVY
FEMALE OFFICERS BY POPULATION AND AGE GROUP**

POPULATION GROUP	AGE GROUP	77	78	79	80	81	82	83	84	85	86	87	88
WHITE	<18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	18-20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	21-25	9.7	9.3	13	13	12	10	13	8.6	12	11	8.6	10
	26-30	6.1	7.3	9.7	8.6	10	7.5	7.5	8.0	7.4	10	7.9	7.4
	31-40	1.9	2.7	5.0	4.1	4.6	3.7	4.3	4.3	3.8	8.3	3.2	3.2
	41-50	0.4	1.2	0.5	0.0	2.2	0.9	0.9	3.3	0.8	3.6	1.1	2.2
	>50	3.1	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BLACK	<18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	18-20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	21-25	20	13	0.0	21	5.2	8.3	6.6	8.9	5.7	9.4	5.5	11
	26-30	7.7	0.0	4.8	6.5	11	5.2	11	8.3	3.6	10	8.1	6.0
	31-40	0.0	0.0	0.0	0.0	8.1	1.8	5.2	5.8	3.9	6.7	4.0	2.0
	41-50	0.0	0.0	0.0	0.0	0.0	7.1	6.3	0.0	6.3	0.0	0.0	0.0
	>50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HISPANIC	<18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	18-20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	21-25	10	6.4	5.7	7.0	13	7.7	21	7.1	5.9	11	5.9	6.9
	26-30	6.7	2.0	7.4	3.0	10	22	11	6.9	8.3	11	8.9	11
	31-40	0.0	0.0	0.0	6.5	0.0	0.0	9.1	12	10	11	7.9	0.0
	41-50	0.0	0.0	0.0	9.1	0.0	0.0	0.0	33	0.0	0.0	0.0	33
	>50	0.0	0.0	0.0	0.0	33	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER	<18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	18-20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	21-25	8.7	16	19	0.0	9.0	0.0	0.0	4.0	0.0	17	10	3.3
	26-30	0.0	5.9	8.7	3.3	5.5	20	4.5	14	3.1	10	12	9.1
	31-40	0.0	14	4.8	8.6	8.7	0.0	0.0	0.0	0.0	0.0	8.3	6.5
	41-50	0.0	0.0	6.7	7.1	0.0	0.0	20	8.3	0.0	0.0	0.0	0.0
	>50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Source: DoD Defense Manpower Data Center

NOTE: TABULAR RATES ARE PRESENTED AS INSTANCES PER 100

APPENDIX F - LOGISTIC REGRESSION RESULTS (MODELS 1 AND 2)

Table LIV EFFECT OF DIVORCE EXPERIENCE ON REENLISTMENT PROPENSITY (NAVY ENLISTED PERSONNEL)

VARIABLE	MEAN	STANDARD DEVI- ATION	BETA(1)	BETA(2)	STANDARD ERROR		P-VALUE (1)/(2)
					(1)	(2)	
GENDER	0.09	0.03	-0.27	-0.18	-0.08	0.01	.00/ *
SCHOOL	1.23	0.49	-0.13	-0.17	0.06	0.01	.03/ *
RACE	0.23	0.42	0.14	0.20	0.07	0.01	.04/ *
CHILDREN	0.41	0.49	0.23	0.20	0.07	0.01	.00/ *
DIVORCE	0.15	0.36	0.03	0.16	0.07	0.01	.65/ *
CSPOUSE	0.48	0.49	-0.01	0.18	0.08	0.01	.88/ *
MSPOUSE	0.05	0.77	-0.17	0.08	0.09	0.02	.08/.00
RANK	4.62	0.35	0.28	0.19	0.04	0.00	.00/ *
MONEY **	0.73	1.44	-0.03	0.01	0.02	0.01	.10/.30
LOS	6.29	4.55	0.08	0.11	0.01	0.00	.00/ *
ONSHIP	0.46	0.49	-0.30	-0.29	0.07	0.01	.00/ *
MILSAT	0.49	0.49	-0.49	-1.89	0.02	0.01	*/ *
PCS	2.64	2.27	0.01	-0.02	0.02	0.00	.52/ *
CIVJOB	0.67	0.47	-0.09	-0.42	0.01	0.01	.00/ *
AGE	25.60	5.23	0.04	0.02	0.01	0.00	.00/ *
OCC1	0.03	0.18	-0.01	----	0.21	----	.94/----
OCC2	0.14	0.35	-0.62	----	0.15	----	.00/----
OCC3	0.14	0.34	-0.17	----	0.15	----	.25/----
OCC4	0.09	0.28	-0.28	----	0.16	----	.07/----
OCC5	0.02	0.13	-0.33	----	0.25	----	.18/----
OCC6	0.19	0.39	-0.05	----	0.15	----	.72/----
OCC7	0.23	0.42	-0.27	----	0.15	----	.06/----
OCC8	0.04	0.19	-0.24	----	0.19	----	.21/----
OCC9	0.06	0.23	-0.39	----	0.18	----	.03/----

* P-VALUE SMALLER THAN .000

** ONLY VARIABLE THAT DID NOT MEET THE DESIRED .10 SIGNIFICANCE LEVEL

CLASSIFICATION TABLE RESULTS	MODEL 1	MODEL 2
CORRECT	75.3%	75.1%
SENSITIVITY	78.2%	69.2%
SPECIFICITY	72.5%	79.8%
FALSE POSITIVE	26.0%	27.2%
FALSE NEGATIVE	23.2%	23.2%

APPENDIX G - LOGISTIC REGRESSION RESULTS (MODELS 3 AND 4)

Table LV EFFECTS OF VARIOUS MARITAL STATUS' ON REENLISTMENT PROPENSITY (NAVY ENLISTED PERSONNEL)

VARIABLE	MEAN	STANDARD DEVI- ATION	BETA(3)	BETA(4)	STANDARD ERROR (3)	STANDARD ERROR (4)	P-VALUE (3)/(4)
GENDER	0.09	0.03	-0.29	-0.14	0.08	0.01	.00/.000
SCHOOL	1.23	0.49	-0.11	-0.17	0.06	0.01	.06/ *
RACE	0.23	0.42	0.13	0.15	0.06	0.01	.05/ *
CHILDREN	0.41	0.49	0.18	0.23	0.07	0.01	.01/ *
SINGLE	0.57	0.49	---	-0.67	---	0.20	---/.000
DIVORCED	0.05	0.22	0.19	1.06	0.12	0.20	.11/.000
MARRIED	0.41	0.49	-0.17	0.92	0.28	0.20	.54/.000
REMARRY	0.08	0.27	-0.16	1.09	0.29	0.20	.58/.000
SEPARATE	0.03	0.16**	-0.19	0.79	0.31	0.20	.52/.000
RANK	4.60	0.35	0.29	0.25	0.04	0.00	.00/ *
LOS	6.29	4.55	0.08	0.08	0.01	0.00	.00/ *
ONSHIP	0.47	0.49	-0.29	-0.29	0.07	0.01	.00/ *
CSPOUSE	0.48	0.49	0.22	---	0.28	---	.43/ *
MSPOUSE	0.05	0.22	0.06	---	0.29	---	.82/ *
MONEY	0.73	1.44	-0.02	0.14	0.02	0.01	.21/ *
MILSAT	0.49	0.49	-0.50	-2.34	0.02	0.01	* / *
CIVJOB	0.67	0.47	-0.09	-0.54	0.01	0.01	.00/ *
AGE	25.67	5.23	0.03	0.03	0.01	0.00	.00/ *
OCC1	0.03	0.18	0.02	---	0.20	---	.92/---
OCC2	0.14	0.35	-0.60	---	0.15	---	.00/---
OCC3	0.14	0.34	-0.20	---	0.15	---	.17/---
OCC4	0.09	0.28	-0.24	---	0.16	---	.13/---
OCC5	0.02	0.13	-0.29	---	0.24	---	.22/---
OCC6	0.19	0.39	-0.03	---	0.14	---	.84/---
OCC7	0.23	0.42	-0.28	---	0.14	---	.05/---
OCC8	0.04	0.19	-0.29	---	0.19	---	.13/---
OCC9	0.06	0.23	-0.37	---	0.17	---	.03/---

* P-VALUE SMALLER THAN .000

** VARIABLE HAS LIMITED DISPERSION

CLASSIFICATION TABLE RESULTS	MODEL 1	MODEL 2
CORRECT	75.3%	79.0%
SENSITIVITY	78.5%	70.0%
SPECIFICITY	72.1%	85.3%
FALSE POSITIVE	26.0%	23.2%
FALSE NEGATIVE	23.2%	19.6%

APPENDIX H - CROSSTABS (INTENT)

Table LVI INTENT BY PRESENT MARITAL STATE

INTENT		PRESENT MARITAL STATE					
FREQUENCY							
PERCENT							
ROW PCT							
COL PCT	MARRIED	REARRY	DIVORCED	SEPARATE	SINGLE	TOTAL	
0	65253.8	9530.61	5750.05	4321.83	99770.5	184627	
	19.64	2.87	1.73	1.30	30.03	55.57	
	35.34	5.16	3.11	2.34	54.04		
	46.63	32.07	43.59	51.83	70.74		
1	74698.1	20186.6	7441.99	4016.21	41258.9	147602	
	22.48	6.08	2.24	1.21	12.42	44.43	
	50.61	13.68	5.04	2.72	27.95		
	53.37	67.93	56.41	48.17	29.26		
TOTAL	139952	29717.2	13192	8338.04	141029	332229	
	42.13	8.94	3.97	2.51	42.45	100.00	

Source: 1985 DoD Survey of Officer and Enlisted Personnel

Table LVII INTENT BY ONSHIP

FREQUENCY			
PERCENT			
ROW PCT			
COL PCT	0	1	TOTAL
0	85049	97698.8	182748
	25.83	29.67	55.50
	46.54	53.46	
	47.22	65.50	
1	95054.9	51464.1	146519
	28.87	15.63	44.50
	64.8	35.12	
	52.78	34.50	
TOTAL	180104	149163	329267
	54.70	45.30	100.00

Source: 1985 DoD Survey of Officer

Table LVIII INTENT BY GENDER

FREQUENCY			
PERCENT			
ROW PCT			
COL PCT	MALE	FEMALE	TOTAL
-----+-----+-----+			
GO	167720	16906.4	184627
	50.48	5.09	55.57
	90.84	9.16	
	55.46	56.74	
-----+-----+-----+			
STAY	134712	12889.5	147602
	40.55	3.88	44.43
	91.27	8.73	
	44.54	43.26	
-----+-----+-----+			
TOTAL	302433	29795.9	332229
	91.03	8.97	100.00

**Source: 1985 DoD Survey of Officer
and Enlisted Personnel**

Table LIX INTENT BY RACE

FREQUENCY			
PERCENT			
ROW PCT			
COL PCT	WHITE	OTHER	TOTAL
GO	144608	40018.4	184627
	43.53	12.05	55.57
	78.32	21.68	
	56.75	51.70	
STAY	110211	37390.9	147602
	33.17	11.25	44.43
	74.67	25.33	
	43.25	48.30	
TOTAL	254819	77409.3	332229
	76.70	23.30	100.00

Source: 1985 DoD Survey of Officer
and Enlisted Personnel

Table LX INTENT BY DIVORCE

FREQUENCY			
PERCENT			
ROW PCT			
COL PCT	NO	YES	TOTAL
-----+-----+-----+			
GO	165024	19602.5	184627
	49.67	5.90	55.57
	89.38	10.62	
	58.73	38.25	
-----+-----+-----+			
STAY	115957	31644.8	147602
	34.90	9.52	44.43
	78.56	21.44	
	41.27	61.75	
-----+-----+-----+			
TOTAL	280981	51247.2	332229
	84.57	15.43	100.00

Source: 1985 DoD Survey of Officer
and Enlisted Personnel

Table LXI INTENT BY REMARRY

FREQUENCY			
PERCENT			
ROW PCT			
COL PCT	NO	YES	TOTAL
-----+-----+-----+			
GO	175096	9530.61	184627
	52.70	2.87	55.57
	94.84	5.16	
	57.88	32.07	
-----+-----+-----+			
STAY	127415	20186.6	147602
	38.35	6.08	44.43
	86.32	13.68	
	42.12	67.93	
-----+-----+-----+			
TOTAL	302511	29717.2	332229
	91.06	8.94	100.00

**Source: 1985 DoD Survey of Officer
and Enlisted Personnel**

APPENDIX I - CROSSTABS (DIVORCE)

Table LXII DIVORCE BY RACE4 (RACE/ETHNIC GROUP)

FREQUENCY					
PERCENT					
ROW PCT					
COL PCT	BLACK	HISPANIC	WHITE	OTHER	TOTAL
NO	32793.6	19452.1	212233	16502.7	280981
	9.87	5.86	63.88	4.97	84.57
	11.67	6.92	75.53	5.87	
	88.00	90.56	83.29	88.41	
YES	4470.74	2027.28	42586.3	2162.92	51247.2
	1.35	0.61	12.82	0.65	15.43
	8.72	3.96	83.10	4.22	
	12.00	9.44	16.71	11.59	
TOTAL	37264.4	21479.3	254819	18665.6	332229
	11.22	6.47	76.70	5.62	100.00

Source: 1985 DoD Survey of Officer and Enlisted Personnel

Table LXIII DIVORCE BY ONSHIP

FREQUENCY			
PERCENT			
ROW PCT			
COL PCT	NO	YES	TOTAL
-----+-----+-----+			
NO	146461	131749	278210
	44.48	40.01	84.49
	52.64	47.36	
	81.32	88.33	
-----+-----+-----+			
YES	33642.6	17414.2	51056.9
	10.22	5.29	15.51
	65.89	34.11	
	18.68	11.67	
-----+-----+-----+			
TOTAL	180104	149163	329267
	54.70	45.30	100.00

**Source: 1985 DoD Survey of Officer
and Enlisted Personnel**

Table LXIV DIVORCE BY GENDER

FREQUENCY			
PERCENT			
ROW PCT			
COL PCT	MALE	FEMALE	TOTAL
-----+-----+-----+			
NO	257386	23595.2	280981
	77.47	7.10	84.57
	91.60	8.40	
	85.11	79.19	
-----+-----+-----+			
YES	45046.6	6200.68	51247.2
	13.56	1.87	15.43
	87.90	12.10	
	14.89	20.81	
-----+-----+-----+			
TOTAL	302433	29795.9	332229
	91.03	8.97	100.00

**Source: 1985 DoD Survey of Officer
and Enlisted Personnel**

Table LXV DIVORCE BY RACE

FREQUENCY			
PERCENT			
ROW PCT			
COL PCT	WHITE	OTHER	TOTAL
NO	212233	68748.4	280981
	63.88	20.69	84.57
	75.53	24.47	
	83.29	88.81	
YES	42586.3	8660.93	51247.2
	12.82	2.61	15.43
	83.10	16.90	
	16.71	11.19	
TOTAL	254819	77409.3	332229
	76.70	23.30	100.00

Source: 1985 DoD Survey of Officer and Enlisted Personnel

Table LXVI DIVORCE BY SCHOOL

FREQUENCY				
PERCENT				
ROW PCT				
SOME				
COL PCT	NHSG	HSG/GED	COLLEGE	TOTAL
-----+-----+-----+-----+-----				
NO	9875.23	199982	71124.2	280981
	2.97	60.19	21.41	84.57
	3.51	71.17	25.31	
	81.91	86.10	80.92	
-----+-----+-----+-----+-----				
YES	2180.32	32292.3	16774.7	51247.2
	0.66	9.72	5.05	15.43
	4.25	63.01	32.73	
	18.09	13.90	19.08	
-----+-----+-----+-----+-----				
TOTAL	12055.6	232274	87898.8	332229
	3.63	69.91	26.46	100.00

Source: 1985 DoD Survey of Officer and Enlisted Personnel

APPENDIX J - CORPORATE SURVEY OF AVAILABLE SUPPORT SERVICES

The purpose of this letter is to request information concerning support services your corporation provides to divorced employees, or to any employee who is in the process of altering their marital status. Enclosed is a list of the information I am requesting by 10 September 1990.

I am a graduate student at the Naval Postgraduate School. My thesis deals with divorce and its impact on the personal and professional lives of navy people, the navy command structure's response to sailors grappling with divorce, and an investigation of any statistically significant link between divorce and retention in the Navy. While my efforts focus on the military, I believe the study has important implications for Corporate America.

In the area of organizational responsiveness, I am developing a "military versus civilian" comparative analysis of attitudes, options and available services. The Rand-McNally 1990 Commercial Atlas & Marketing Guide (121st Ed.) lists your corporation as one of the fifty largest industrial or service entities in American Business. Because of the size and diversity of your labor force, the financial resources you can bring to bear on the issue, and your organizational structure, I would like the analysis to include any data you can provide.

A response by 10 September will allow sufficient time to incorporate your data into the aggregate findings of my research. Recognizing that some of the questions are rather detailed, if you cannot answer all of them, please answer those you can. I will make copies of the thesis available once it is completed and approved. I look forward to hearing from you, and thank you in advance for your assistance.

Very respectfully,

THE FOLLOWING INFORMATION IS REQUESTED IN SUPPORT OF GRADUATE STUDY CONCERNING A COMPARATIVE ANALYSIS OF ATTITUDES, OPTIONS AND AVAILABLE SERVICES FOR DIVORCED EMPLOYEES, OR EMPLOYEES IN THE PROCESS OF ALTERING THEIR MARITAL STATUS. ALL PROVISIONS OF THE PRIVACY ACT WILL BE STRICTLY ADHERED TO BY THE RESEARCHER. NAMES AND SOCIAL SECURITY NUMBERS ARE NOT REQUESTED, AND INFORMATION WILL BE USED FOR RESEARCH ONLY.

the aggregate number of people (grouped by age, sex, race, annual income and employment category (general labor, skilled labor, first-line, middle or upper management)) requesting medical or psychological assistance to deal with marital problems.

- the aggregate number of people (grouped by age, sex, race, annual income and employment category (general labor, skilled labor, first-line, middle or upper management)) identified by supervisory personnel as suffering job performance degradation as the result of marital problems.

- any disciplinary actions (letters of reprimand, suspensions, terminations, etc.) resulting from marital problems.

- indications of voluntary employment termination by satisfactory employees due to domestic stress or pressure to relocate.

- support services available through employee insurance plans, and an estimated cost of those services to both the corporation and the individual employee.

- training provided to supervisory personnel to detect performance problems not directly associated with the workplace, and intervention techniques to resolve them.

- the estimated cost to replace employees at various skill levels (general labor, skilled labor, first-line, middle or upper management) who terminate their employment due to marital problems.

- an explanation of formal corporate policy dealing with non-work related employee problems, and informal observations of managers in their efforts to assist their subordinates.

Given the exploratory nature of my thesis, please feel free to include any discussion and data which you believe lend themselves to comparative analysis or further examination of the issue of divorce and its impact on the personal and professional lives of your employees.

APPENDIX K - PERSONAL COUNSELING QUESTIONNAIRE

Dear Respondent,

This brief questionnaire is designed to support a thesis concerning divorce and its impact on military personnel. Regardless of your marital status, we are interested in your experiences, perceptions and observations. As students at NPS, you are the military's "best and brightest." You have probably dealt with divorce, either personally or as a supervisor of someone working through a divorce, and your insights are critical to the success of our project.

Please take a few moments to complete the questionnaire, then return it to SMC 1533. Results will be held in strictest confidence, and only aggregate responses will be revealed.

Respondent Demographic Data:

1. Marital status: Married____ Divorced & re-married____
Never married____ Legally separated____ Divorced____
2. Sex: Male____ Female____ 3. Age____ 4. Race____
5. Rank____ 6. Designator____ 7. Last operational billet
type
(CO,XO,DH,DivOff,etc.)

Those I observed were primarily enlisted personnel. Y N

Those I observed were primarily males. Y N

Those I observed were primarily under 25
years of age. Y N

Those I observed were primarily caucasian. Y N

In what order did those whom you observed seek help?

- _____ Family
- _____ Chain of Command
- _____ Friend
- _____ Chaplain/clergyman
- _____ Family Service Center
- _____ Civilian Counselor
- _____ Navy Legal Services
- _____ Civilian Attorney
- _____ Other _____

In what order would you seek help in dealing with divorce issues?

- _____ Family
- _____ Chain of Command
- _____ Friend
- _____ Chaplain/clergyman
- _____ Family Service Center
- _____ Civilian Counselor
- _____ Navy Legal Services
- _____ Civilian Attorney
- _____ Other _____

Please pick the response which reflects your personal observations concerning work-related aspects of the divorce process:

People in the process of divorce:

- | | | |
|--|---|---|
| improved their job performance. | Y | N |
| were less effective on the job. | Y | N |
| sought professional counseling at some point in the divorce process (legal/"spiritual"/psychological). | Y | N |
| were aware of Navy-sponsored support services. | Y | N |
| utilized Navy-sponsored support services. | Y | N |

if "Yes", why? _____

if "No", why not? _____

Divorce:

impacted the individual's performance evaluations. Y N
was a consideration in job/task assignment. Y N
influenced the person's reenlistment decision. Y N
positively_____ negatively_____

impacted the individual's career. Y N
if "Yes", how?_____

My last command had a policy or procedure to deal with
divorce matters (counseling, referrals, supervisory
involvement, etc.). Y N

I am aware of Navy Family Services resources to the extent
that I could discuss them with a subordinate, or use them
myself. Y N

ANY ADDITIONAL COMMENTS OR OBSERVATIONS?

LIST OF REFERENCES

1. Warner, John T., and Matthew S. Goldberg, "The Influence of Non-Pecuniary Factors on Labor Supply: The Case of Navy Enlisted Personnel," Review of Economics and Statistics, Vol. 66, 1984.
2. Ibid.
3. Segal, Mady W., "The Military and the Family as Greedy Institutions," Armed Forces and Society, Vol. 13, No.1, p. 9, Fall 1986.
4. Segal, p. 12.
5. Carlson, Elwood and Ruth, Navy Marriages and Deployment, p. 5, University Press of America, 1984.
6. U.S. Bureau of the Census, Statistical Abstract of the United States, p. 42, 1990.
7. Naval Military Personnel Command (NMPC-661) Command Briefing, Spring 1990.
8. Carlson, p. 5.
9. Ibid.
10. "Fifty Years of Military Life," Army Times, Vol. 51, No. 6, p. 61, September 1990.
11. Ibid.
12. Carlson, p. 86.
13. "Marriage, Divorce: Changing Patterns," U.S. News and World Report, September 14, 1981.
14. Kessler, Sheila, The American Way of Divorce: Prescription for Change, p. 131, Nelson-Hall, Chicago, 1975.
15. Uniformed Services Former Spouses Protection Act, Hearings before the Subcommittee on Manpower and Personnel, U.S. Government Printing Office, Washington, D.C. (1982), p. 14.
16. Moskos, Charles C., "The Marketplace All-Volunteer Force: A Critique," The All-Volunteer Force After a Decade, Pergamon-Brassey's International Defense Publications, p. 16, 1986.

17. Carlson, p. 9.
18. Center for Naval Analyses Research Memorandum 85-25, Determinants of Dependency Rates for Marine Corps Enlisted Personnel, by Peter F. Kostink, p. 3, May 1985.
19. Segal, David R., and Sinaiko, H. Wallace, Life in the Rank and File, Pergamon-Brassey's International Defense Publishers, p. 40, 1984.
20. Maurice, S. Charles, and Smithson, Charles W., Managerial Economics, Richard D Irwin, Inc., p. 100, 1988.
21. Tullock, Gordon and McKenzie, The New World of Economics, Richard D. Irwin, Inc., p. 72, 1985.
22. Tullock, p. 73.
23. Broeker, Arla M., Divorces and Separations in the Navy: How to Cope, Masters Thesis, Naval Postgraduate School, Monterey, CA, December 1983.
24. Tullock, p. 72.
25. Tullock, p. 75.
26. Ibid.
27. "Fifty Years of Military Life 1990," Army Times, Vol. 51, No. 6, p. 152, September 1990.
28. Warner, John T., and Goldberg, Matthew S., "The Influence of Non-Pecuniary Factors on Labor Supply: The Case of Navy Enlisted Personnel," Review of Economics and Statistics, Vol. 66, p. 31, 1984.
29. Center for Naval Analyses, The Effects of Selective Reenlistment Bonuses on Retention, by Donald J. Cymrot.
30. Cymrot, p. 33.
31. Warner and Goldberg, p. 31.
32. Kostink, p. 6.
33. Army Times, p. 152.
34. Ibid.
35. Ibid.

- 36.Kessler, p. 110.
- 37.Eitelberg, Mark J., Manpower for Military Occupations, Human Resources Research Organization, p. 12, April 1988.
- 38.Eitelberg, p. 16.
- 39.Eitelberg, p. 13.
- 40.Kessler, p. 110.
- 41.Ibid.
- 42.White, Lynn K., "Determinants of Divorce: A Review of Research in the Eighties," Journal of Marriage and the Family, Vol. 52, p. 904, November 1990.
- 43.Segal, Mady W., "The Military and the Family as Greedy Institutions," Armed Forces and Society, Vol 13, No. 1, p. 9, Fall 1986.
- 44.Segal, p. 19.
- 45.White, p. 904.
- 46.Broeker, p. 56.
- 47.Segal, p. 19.
- 48.White, p. 908.
- 49.White, p. 905.
- 50.Broeker, p. 56.
- 51.White, p. 908.
- 52.Defense Manpower Data Center, Description of Officers and Enlisted Personnel in the U.S. Armed Forces: 1985, by Barbara Moser et al, 1985, p. 185.
- 53.Moser, p. 197.
- 54.White, p. 907.
- 55.Segal, p. 20.
- 56.Ibid.
- 57.Segal, p. 23.

58. White, p. 905.
59. Segal, p. 16.
60. Lowell, Richard W., An Analysis of Factors Affecting the Career Orientation/Turnover Behavior of Female Naval Officers, Master's Thesis, Naval Postgraduate School, Monterey, CA, p. 17, December 1989.
61. Lowell, p. 22.
62. Hunter, Edna J., and Melissa A. Pope, Family Roles in Transition in a Changing Military, p. 6, 1981.
63. Broeker, p. 75.
64. Center for Naval Analyses Report 139, A Study of Marine Corps Family Programs, by Edward S. Cavin, p. iv, February 1988.
65. Hunter, Edna J., Families Under the Flag, p. 82, Praeger Publishers, 1982.
66. Department of the Navy, Final Report of the Navywide Family Awareness Conference (OP-152), Norfolk, VA, November 1978.
67. U.S. Department of Defense, "Military Women in the Department of Defense," Volume III, Manpower Installations and Logistics, pp. 37, 51, Government Printing Office, Washington, DC, April 1985.
68. Uniformed Services Former Spouses Protection Act, Hearings before the Subcommittee on Manpower and Personnel, p. 14, Government Printing Office, Washington, DC, 1982.
69. Hearings before the Subcommittee on Manpower and Personnel, p. 219.
70. Rider, M.W., Single Parents in the Military, Masters Thesis, Naval Postgraduate School, Monterey, CA, June 1980.
71. Hickman, R.A. and Hunter, E.J., Military Retention and Retirement: Reciprocal Family/Organizational Effects, p. 5, United States International University, San Diego, CA, 1981.
72. Enlisted Article Z-I-12 and Officer Article I-A-10, Navy Recruiting Manual.
73. Naval Military Personnel Command (NMPC-6E), Washington, D.C., letter 1122 Ser N6E/007 of 29 June 1990, Subject: Center

58. White, p. 905.
59. Segal, p. 16.
60. Lowell, Richard W., An Analysis of Factors Affecting the Career Orientation/Turnover Behavior of Female Naval Officers, Master's Thesis, Naval Postgraduate School, Monterey, CA, p. 17, December 1989.
61. Lowell, p. 22.
62. Hunter, Edna J., and Melissa A. Pope, Family Roles in Transition in a Changing Military, p. 6, 1981.
63. Broeker, p. 75.
64. Center for Naval Analyses Report 139, A Study of Marine Corps Family Programs, by Edward S. Cavin, p. iv, February 1988.
65. Hunter, Edna J., Families Under the Flag, p. 82, Praeger Publishers, 1982.
66. Department of the Navy, Final Report of the Navywide Family Awareness Conference (OP-152), Norfolk, VA, November 1978.
67. U.S. Department of Defense, "Military Women in the Department of Defense," Volume III, Manpower Installations and Logistics, pp. 37, 51, Government Printing Office, Washington, DC, April 1985.
68. Uniformed Services Former Spouses Protection Act, Hearings before the Subcommittee on Manpower and Personnel, p. 14, Government Printing Office, Washington, DC, 1982.
69. Hearings before the Subcommittee on Manpower and Personnel, p. 219.
70. Rider, M.W., Single Parents in the Military, Masters Thesis, Naval Postgraduate School, Monterey, CA, June 1980.
71. Hickman, R.A. and Hunter, E.J., Military Retention and Retirement: Reciprocal Family/Organizational Effects, p. 5, United States International University, San Diego, CA, 1981.
72. Enlisted Article Z-I-12 and Officer Article I-A-10, Navy Recruiting Manual.
73. Naval Military Personnel Command (NMPC-6E), Washington, D.C., letter 1122 Ser N6E/007 of 29 June 1990, Subject: Center

BIBLIOGRAPHY

- Bowen, Gary L., "Satisfaction with Family Life in the Military," Armed Forces and Society, Vol. 15, No. 4, Summer 1989.
- Center for Demographic Studies, Military Families: Do They Differ from Their Civilian Counterparts?, by Larry Long, U.S. Bureau of the Census, Washington, DC, 24 August 1984.
- Center for Naval Analyses Research Memorandum 82-1733, Determinants of Reenlistment and Extension Rates in the United States Marine Corps, by M. S. Goldberg and J. T. Warner, 2 November 1982.
- Center for Naval Analyses Research Memorandum 86-198, An Analysis of Marine Corps Enlisted Dependency Rates, by D. J. Cymrot, March 1987.
- Center for Naval Analyses Report 121, Educational Quality Requirements for Marine Corps Enlisted Personnel, by L. J. May, July 1986.
- Center for Naval Analyses Report 139, A Study of Marine Corps Family Programs, by Edward S. Cavin, February 1988.
- Center for Naval Analyses Report 578, Is There Such a Thing as Overall Satisfaction With Military Life? A Factor Analysis of Marine Corps Data, by Edward S. Cavin, February 1988.
- Department of Defense, Defense '80, Washington, DC, September 1980.
- Department of Defense, Defense '86, Washington, DC, September/October 1986.
- Defense Manpower Data Center, Description of Spouses of Officers and Enlisted Personnel in the United States Armed Forces: 1985. Supplementary Tabulations from the 1985 DoD Surveys of Officer and Enlisted Personnel and Military Spouses (3 Volumes), November 1986a and June 1986b.
- Fullerton, Howard N., Jr., "The 1995 Labor Force: BLS's Latest Projections," Monthly Labor Review, November 1985.
- Furukawa, Theodore P., and Teitelbaum, Joel D., "Human Dimensions: Anatomy of a Light Infantry Unit and Its

Families," Department of Military Psychiatry, Focus on Soldier/Family Behavior and Unit Stress: Policy Issues and Research Findings on Cohort Light Infantry, Walter Reed Army Institute of Research, October 1987.

Goldman, Nancy L., "Trends in Family Patterns of U.S. Military Personnel During the Twentieth Century," The Social Psychology of Military Service, Sage, Beverly Hills, 1976.

Gould, S. J., The Mismeasure of Man, W. W. Norton and Co., New York, 1981.

Grossman, Allyson S., "The Employment Situation for Military Wives," Monthly Labor Review, February 1981.

Harman, H. H., Modern Factor Analysis (2nd Edition), University of Chicago Press, Chicago, IL, 1967.

Hayge, Howard V., "Military and Civilian Wives: Update on the Labor Force Gap," Monthly Labor Review, December 1986.

Institute of Naval Studies, An Analysis of First Term Reenlistment Intention, by P. Stoloff, R. Lockman, A. Allbritten, and H. McKinley, 1979.

Joreskog, K. G., and Goldberger, A. S., "Estimation of a Model with Multiple Indicators and Multiple Causes of a Single Latent Variable," Journal of the American Statistical Association '70, 1975.

Kerlinger, F. M., and Pedhazur, E. J., Multiple Regression in Behavioral Research, Holt, Rinehart and Winston, Inc., New York, 1973.

Maddala, G. S., Limited-Dependent and Qualitative Variables in Econometrics, Cambridge University Press, Cambridge, 1983.

Morrison, D. F., Multivariate Statistical Methods, McGraw-Hill, Inc., New York, 1976.

The RAND Corporation, N-2078-MRAL, The Accuracy of Simple Enlisted Force Forecasts, by David W. Grissmer, 1985.

The RAND Corporation, N-2624-A, Families and Mission: A Review of the Effects of Family Factors on Army Attrition, Retention, and Readiness, by Georges Vernez and Gail Zellman, 1987.

The RAND Corporation, P-6967, Active Enlisted Supply: Prospects and Policy Options, by J. R. Hosek, R. L. Fernandez, and D. W. Grissmer, March 1984.

- The RAND Corporation, R-2285-NICHD, Completed Fertility and Its Timing: An Economic Analysis of U.S. Experience Since World War II, by Michael P. Ward and William P. Butz, April 1978.
- The RAND Corporation, R-2851-MRAL, Description of Officers and Enlisted Personnel in the U.S. Armed Forces: A Reference for Military Manpower Analysis, by Zahava D. Doering, et al., March 1982.
- The RAND Corporation, R-3065-MIL, Recruiter Incentives and Enlistment Supply, by J. Dertouzon, May 1985.
- The RAND Corporation, R-3069-MIL, Analysis of Early Military Attrition Behavior, by R. Buddin, July 1984.
- The RAND Corporation, R-3691-A, Families in the Army: Looking Ahead, by P. A. Morrison, G. Vernez, D. W. Grissmer, and K. F. McCarthy, 1989.
- U.S. Bureau of the Census, "Marital Status and Living Arrangements: March 1985," Current Population Reports, Series P-20, No. 411, 1986b.
- U.S. Bureau of the Census, Statistical Abstract of the United States (1986), Government Printing Office, Washington, DC, December 1985.
- Walter Reed Army Institute of Research, WRAIR-XIP-84-6, The Impact of Deployment Separation on Army Families, by E. W. Van Vranken, et al., August 1984.
- Warner, John T., and Goldberg, Matthew S., "The Influence of Non-Pecuniary Factors on Labor Supply: The Case of Navy Enlisted Personnel," Review of Economics and Statistics, Vol. 66, 1984.
- Westinghouse Public Applied Systems Report, Family Factors Critical to the Retention of Navy Personnel, by R. Szoc, 5 November 1982.
- Westinghouse Public Applied Systems Report 46553, Follow-On Study of Family Factors Critical to the Retention of Navy Personnel, by R. Szoc and B. Seboda, 14 February 1984.

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