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THESIS

ENLISTED NAVY RESERVISTS AND THEIR INTENTION TO STAY IN THE NAVY RESERVES UNTIL RETIREMENT ELIGIBLE

by

Rita Alice Becker

June 2005

Thesis Advisor:	Kathryn Kocher
Second Reader:	Elda Pema

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ENLISTED NAVY RESERVISTS AND THEIR INTENTION TO STAY IN THE NAVY RESERVE UNTIL RETIREMENT ELIGIBLE

Rita A. Becker
Lieutenant Commander, United States Navy Reserve
B.A., Northern Arizona University, 1991

Submitted in partial fulfillment of the
requirements for the degree of

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June 2005

Author: Rita Alice Becker

Approved by: Kathryn Kocher
Thesis Advisor

Elda Pema
Second Reader

Douglas A. Brook, Dean
Graduate School of Business and Public Policy

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I. INTRODUCTION

A. PURPOSE

This thesis examines the retirement intent of enlisted Navy Reservists in the paygrades of E1-E6. Navy Reserve attrition is approximately 30% annually. “The majority of Navy reservists who decide to leave the Navy Reserves do so within their first year of service. The goal of this thesis is to identify those areas that help to retain Navy Reservists in order to ensure future enhancement of those programs and/or conditions.

B. HISTORY AND BACKGROUND

The website of Commander, Navy Reserve Force, Vice Admiral John G. Cotton states the mission and importance of the Navy Reserves.

> The mission of the U.S. Navy Reserve Force is to provide mission-capable units and individuals to the Navy-Marine Corps Team throughout the full range of operations from peace to war.
>
> In today's environment this new mandate takes on added meaning and responsibilities as the Navy Reserve Force is called on to play an increasingly active role in the day to day planning and operational requirements of the active Navy. The Navy Reserve represents 20% of the Navy's total assets and is a significant force multiplier the fleet must have to meet its growing global commitments. (Ref 1)

In his testimony before the Senate’s Armed Forces Committee, Vice Admiral Cotton noted that more than 28,000 Navy Reservists have been mobilized since 9/11 and nearly 12,000 served on active duty during the peak of Operation Iraqi Freedom (OIF) in May 2003. (Ref 2) Additionally, VADM Cotton quoted the Chief of Naval Operations (CNO) ADM

Vern Clark, “Change to make us better is completely necessary…to make our Navy even better and to build the 21st century Navy, and the Reserve is a key part of our growth and our future.” (Ref 3)

C. RESERVE CATEGORIES

The United States has approximately 690,000 Navy Reservists. Navy Reservists fall into one of three categories: Ready Reserve, Standby Reserve (Active or Inactive), or the Retired Reserve.

1. Ready Reserve

The Ready Reserve is composed of Selected Reserve (SELRES), and Individual Ready Reserve (IRR) personnel. In 2002 the Ready Reserve membership was as follows: SELRES 87,913 and IRR 80,541, which together, as the Ready Reserve, totaled 168,454. (Ref 4) As of May 18, 2005 a total of 3,574 Navy Reserve SELRES personnel were mobilized in support of the Global War on Terror. (Ref 5)

The Navy’s SELRES are the principal source of trained units and personnel to augment the active forces in time of war or national emergency. SELRES are those members who are allowed to participate in monthly drills for pay, extended Active Duty for Special Work (ADSW), or Active Duty for Training (ADSW). Additionally, Full Time Support members (primarily those members who man the nation’s Navy Reserve Centers on an active duty basis) are SELRES. (Ref 6)

The IRR consists of pre-trained personnel who either drill in a Voluntary Training Unit (VTU) or do not drill. Most IRR personnel who do not drill have recently served on active duty. (Ref 6)

2. Standby Reserve

Members of the Standby Reserve will be mobilized if there are not enough qualified SELRES or IRR members to meet requirements. The Standby Reserve consists of Active and Inactive members. Standby Reserve-Active individuals possess desired mobilization skills. They are in an active status and eligible to participate in a Navy Reserve program without pay for retirement point credit. Standby Reserve-Inactive reservists are in an inactive status. (Ref 6)

3. Retired Reserve

Mobilized retirees will be used primarily to staff continental United States installations. All naval retired personnel are grouped into three classes: Class I (retired less than 5 years, under age 60, and fully eligible for recall), Class II (retired more than 5 years, under age 60, and fully eligible for recall), and Class III (Retirees either over age 60 or disabled).(Ref 6)

D. CHARACTERISTICS OF THE NAVY RESERVE: COMPARISON WITH OTHER RESERVE COMPONENTS AND CIVILIAN POPULATION

1. Gender

Table 1 shows the percentages of male and female military reservists throughout the Department of Defense for Fiscal Year 2001 (FY2001) as well as the gender distribution for civilians 18 to 49 years old.

Table 1: FY2001 Enlisted SELRES by Gender

FY 2001 Selected Reserve Enlisted Members, by Gender and Component, and Civilian Labor Force 18-49 Years Old (Percent)								
Gender	**Army National Guard**	**Army Reserve**	**Naval Reserve**	**Marine Corps Reserve**	**Air National Guard**	**Air Force Reserve**	**Total DoD**	**18 to 49 Year Old Civilians**
Male	87.6	75.0	79.4	95.3	82.4	78.4	83.0	53.4
Female	12.4	25.0	20.6	4.7	17.6	21.6	17.0	46.6

Source: Office of the Under Secretary of Defense Personnel and Readiness (Ref 7)

Among the reserve components, the highest percentage of females is in the Army Reserve at 25.0% with Air Force Reserve second at 21.6%. The Navy Reserve female percentage is a close third in rank with 20.6% as the female manpower proportion. Gender alignment correlates to unit mission requirements. For example, combat units normally maintain a higher percentage of males, due to Congressional laws which do not allow females in front line combat positions. (Ref 7).

2. Marital Status

Table 2 shows the percent married for female and male military reservists for FY2001 and for 18 to 49 year old civilians.

Table 2: FY2001 Enlisted SELRES and Marital Status

FY2001 Married Selected Reserve Enlisted Members, by Gender, and Civilian Labor Force 18-49 Years Old (Percent)

Gender	DoD	18 to 49 Year Old Civilians
Male	50.1	55.6
Female	34.7	52.8
Total	48.1	54.3

Source: Office of the Under Secretary of Defense Personnel and Readiness (Ref 8)

Male DoD enlisted members were in a married status during FY2001 at a 15.4% higher percentage rate than their female counterparts. A higher percentage of civilians aged 18 to 49 years old were in a married status as compared to military enlisted members. For example, the male civilian population was in a married status at a 5.5% higher rate

than the male military enlisted members. In the age group of 18 to 49, female enlisted members are on average younger than the same age group (18 to 49) of female civilians. This may partially account for the fact that the female civilian population had a status of being married at an 18.1% higher rate than the female military enlisted members. (Ref 8).

3. Prior Service Status

Table 3 shows FY2001 DoD Non-Prior Service (NPS) and Prior Service accessions with each corresponding enlisted end-strength for all Reserve components.

Table 3: FY2001 SELRES Prior Service Status

FY 2001 Selected Reserve Non-Prior Service and Prior Service Enlisted Accessions				
Components	**Enlisted Accessions**			
	Non-Prior Service	**Prior Service**	**Total**	**Prior Service Percent of Accession Total**
Army National Guard	33,405	28,942	62,347	46.4
Army Reserve	20,801	24,461	45,262	54.0
Navy Reserve	3,652	16,002	19,654	81.4
USMC Reserve	5,845	3,704	9,549	38.8
Air National Guard	5,844	5,198	11,042	47.1
Air Force Guard	2,603	5,971	8,574	69.6
DoD Total	72,150	84,278	156,428	53.9

Source: Office of the Under Secretary of Defense Personnel and Readiness (Ref 9)

Prior service accessions are those members who leave active duty and join the reserves. Prior service accessions bring to the reserves great amounts of training and active duty experience. This active duty experience is invaluable to the reserves; it helps to increase reserve

mobilization readiness with little or no training costs. As Table 3 shows, the Navy Reserve had the highest percent of prior service accessions (84.1%) during FY2001. After the late 1990's, attrition from active duty began to slow down which created a smaller pool of prior service members from which the reserve components could recruit. (Ref 9)

4. Representation within Occupations

Table 4 lists the enlisted occupational areas of reserve and active duty members. Enlisted jobs are categorized into ten occupational areas numbered 0 to 9. The Navy numbers their rating groups 1 to 10 with group 7 (Mechanical equipment repair) divided into 7A (aviation) and 7S (surface).

Table 4: Enlisted Occupational Areas and Codes

Reserve and Active Enlisted Occupational Areas	
Occupational Code and Area	
0	Infantry, Gun Crews, and Seamanship Specialist
1	Electronic Equipment Repairers
2	Communications and Intelligence Specialists
3	Medical and Dental Specialists
4	Other Allied Specialists
5	Functional Support and Administration
6	Electrical/Mechanical Equipment Repairers
7	Craftsmen
8	Service and Supply Handlers
9	Non-occupational

Source: Author, derived from Office of the Under Secretary of Defense Personnel and Readiness (Ref 10)

Military personnel are placed into occupational areas based primarily on military requirements, personnel qualifications, preferences, and personal availability. Each service has different mission requirements that are reflected in each service's occupations. (Ref 10)

Table 5 compares the distribution of FY2001 reserve and active duty enlisted occupations by service component. Table 4 is the reference for the Occupational Area and Code listings in Table 5.

Occupational Area 5 (Functional Support and Administration) makes up 10.4% more of the occupational distribution for the Navy Active Reserve (21.1%) than for the Navy Active component (10.7%) as shown in Table 5. Occupational Area 7 (Craftsmen) account for 9.2% more of Navy Reserve personnel (14.5%) than of the Navy Active Component (5.3%).

Table 5: FY2001 Reserve and Active Distribution of Enlisted Occupations by Service Component

Comparison of FY 2001 Occupational Area Distribution of Enlisted Members, by Active and Reserve Components (Percent)										
	Occupational Area									
Active and Reserve Components	0	1	2	3	4	5	6	7	8	9
Army										
Active Component	24.2	6.5	10.8	7.7	3.4	16.8	14.6	2.1	12.3	1.6
Army National Guard	23.2	3.0	4.9	4.3	2.5	13.5	13.7	3.9	11.2	19.8
Army Reserve	9.2	2.1	3.8	10.6	3.6	23.6	10.8	5.4	16.3	14.7
Navy										
Active Component	10.2	14.9	8.6	7.9	2.1	10.7	26.2	5.3	4.3	9.9
Naval Reserve	10.7	10.7	6.5	9.9	0.8	21.1	19.6	14.5	5.1	1.0
Marine Corps										
Active Component	21.7	6.5	6.9	0.0	2.5	16.5	16.6	2.5	13.1	13.8
USMC Reserve	28.8	3.2	7.7	0.0	1.2	13.5	13.1	3.2	15.2	14.3
Air Force										
Active Component	10.2	9.6	8.2	7.8	3.9	22.1	24.3	4.6	5.2	4.3
Air National Guard	8.4	9.3	3.5	4.7	4.6	21.3	26.1	6.6	6.1	9.5
USAF Reserve	12.6	5.2	3.1	10.6	3.4	25.3	22.7	6.0	4.9	6.3

Source: Office of the Under Secretary of Defense Personnel and Readiness (Ref 10)

5. Age

Table 6 shows enlisted Selected Reservists by age and military service component, and the age distributions for total DoD and for United States civilians.

Table 6: FY2001 SELRES Enlisted by Age and Component

FY 2001 Selected Reserve Enlisted Members, by Age and Component, and Civilian Labor Force Over 16 Years Old (Percent)

Age Group	Army National Guard	Army Reserve	Naval Reserve	Marine Corps Reserve	Air National Guard	Air Force Reserve	Total DoD	Civilians
17-19	11.3	12.8	1.0	13.2	4.7	2.3	9.2	4.6
20-24	22.9	23.8	7.3	51.3	13.5	9.0	20.8	10.4
25-29	16.0	15.4	18.0	19.5	13.4	12.5	15.6	10.5
30-34	14.6	13.7	25.7	8.4	16.6	17.5	15.6	11.6
35-39	13.4	13.3	24.3	4.7	18.8	21.7	15.3	12.8
40-44	9.2	9.7	13.3	1.9	13.3	15.5	10.3	13.7
45-49	5.5	5.5	6.1	0.6	8.4	9.9	6.0	12.3
50+	7.2	5.5	4.4	0.4	11.3	11.6	7.1	24.1
Unknown	*	0.3	*	*	0.0	0.0	0.1	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Columns may not add to total due to rounding
* Less than one-tenth of one percent

Source: Office of the Under Secretary of Defense Personnel and Readiness (Ref 11)

The percent of civilians aged forty and up to but not including fifty was 26% in FY 2001. This is almost 7% higher than the Navy Reserve component at 19.4%. Navy Reserve had the lowest percent (1%) of members aged 17 to 19, and also for ages 17 to 24 (8.3%). The higher age for the Navy Reserve was due in part to the NPS accession age limit of twenty-six. In 2003 the age requirement for NPS accessions was changed to allow for ages twenty-one and up to enter the Navy Reserve. The NPS minimum accession age requirement changed again in 2005 to eighteen years of age.

Each reserve component has different mission requirements and these diverse missions require varying age ranges. For example, arduous duty associated with ground combat may require greater numbers of younger members while occupations that require large amounts of training and experience may require higher ranking members who are older. (Ref 11)

D. SCOPE AND METHODOLOGY

This study focuses on several different areas with regard to Navy Reserve retention. The 2000-2001 Navy Reserve Career Decisions Survey supplied by Michael A. White, Ph.D of the Navy Personnel Research, Studies & Technology (NPRST) office in Millington, Tennessee was the source of data used in this thesis. Variables requested from NPRST totaled fifty-six and fell into the following categories: Demographic, Career in the Navy Reserve, Navy Reserve job/working conditions, Personal and family life, and Navy Reserve culture. From the list of fifty-six variables, fourteen were chosen for analysis. Chi-square tests of independence were used to conduct statistical analyses. This type of statistical analysis tests the null hypothesis of independence between the focus and associated variable for each set of cross-tabulations.

E. ORGANIZATION OF STUDY

E1-E6 enlisted Navy Reserve survey respondents were the population studied for this thesis. In an effort to determine those members in first or second enlistment categories, the paygrades were divided into the categories of E1-E5 and E6 Navy Reservists. Active duty members typically promote into E4 or E5 prior to the end of their first enlistment. E1-E5 represents Navy Reservists who are

in their first term of enlistment; E6 represents Navy Reservists who are past their first term of enlistment. Retirement intention was examined by the following categories: gender, marital status, prior service status, unit type, critical (undermanned) rates, and reserve experience.

Chapter II focuses on literature review pertaining to Naval Reserve and other service retention studies. These retention studies suggested variables to be included in the construction of chi-square models.

Chapter III describes the survey organization and data recoding procedures. Explanation of respondent makeup includes specific information on gender and rank categories. Chi-square statistical analysis is explained including specification of null and alternative hypotheses and contingency table interpretation and also includes hypothesized relationships between focus and associated variables.

Chapter IV presents the results of Chi-square analysis from cross-tabulations and the resulting relationships between focus and associated variables.

Chapter V summarizes the focus and associated variable relationships and suggests policies to improve Navy Reserve retention based on the results of the study.

II. LITERATURE REVIEW

A. INTRODUCTION

Upon the signing of his or her initial contract, a Navy sailor incurs an eight-year obligation. If the sailor begins his or her Navy career on active duty, the first enlistment obligation is normally four years with the remaining four years to be spent by the sailor making one of the following choices: another four-year active duty enlistment, a two-year extension, a four-year contract as a drilling Selected Reservist with the Navy Reserves, or four years spent in the IRR. After this initial eight-year period is completed, the sailor is no longer obligated to military service. Non-Prior Service members also incur an eight-year initial obligation, with the first contract normally being for four years participating in the SELRES community, and thereafter making a decision to re-enlist for another four-year period, extending for a two-year period or spending the remaining obligation in the IRR or converting to active duty (subject to the availability of job openings).

This study looks at the intentions of enlisted drilling selected reservists (SELRES) to stay in the Navy Reserve until they are retirement eligible. While no prior studies have looked specifically at Navy Reservist's retirement intentions, a number of researchers have looked at related issues including planned and actual retention, effects of mobilization, influences on continuation, and affiliation of veterans of the Navy Reserve.

B. STUDIES

1. Retention

Kirby et al. (1997) studied the costs and benefits of reserve participation and their effect on retention decisions. Comparisons were made between surveys from FY1986 and FY1992. The study found that 50% of survey participants from both fiscal year surveys ranked three reasons for staying in the selected reserves above all others: retirement benefits, pride in accomplishment, and service to country. Enlisted personnel reported an improvement in their civilian employer's attitude toward the reservist's required drill/annual training time spent away from their full time employment lessening the reservist's stress over being away from their civilian job. Before Operations Desert Shield and Storm (ODS/S), civilian employers reportedly felt as though reserve obligations away from the civilian job were a greater inconvenience to the employer. After ODS/S, reservists reported that civilian employers were more understanding of the reserve requirements, seeing reserve obligations in a more positive light. Spouses of enlisted reservists were very favorable toward reserve participation, helping to encourage the reservists to stay in the reserves. In 1992 when enlisted members were asked if they would reenlist in the reserves, there were larger percentages of those who reported no plans to do so than there were in 1986. In the category of "No Chance" (of re-enlisting) E-7 reservists replies went from 7.1% in 1986 to 17.2% in 1992. (Ref 12)

Rickets (1989) conducted a multivariate analysis of reenlistment intentions of Navy Reservists. She found that "Bonus payments, unit morale, acquaintances and

friendships, mobilization income, and opportunity to serve one's country were the non-traditional variables found to positively influence an individual's decision to remain in the reserves." (Rickets, 1988) As age increased, retention increased. Education and training were found to have a positive impact on retention. Satisfaction with pay had a positive relationship with retention and the author made the recommendation to keep reserve pay in alignment with civilian part-time pay in an effort to keep retention at a higher level. (Ref 13)

Kostiuk et al., (1988) focused on the behavior of navy veterans stating that they make up the greatest percentage of affiliates for the Navy Reserve. This study examined retention rates as they related to pay and affiliation bonuses for a group of 100 Navy veterans leaving active duty. The results of the analysis showed affiliation bonuses and pay changes strongly affected affiliation or retention and in some cases both and that targeted bonuses could greatly help to shape manpower levels for critical rates. (Ref 14)

Kostiuk and Follman (1988) examined the effects of pay on retention on NAVETs in the Selected Navy Reserve. Women and non-white personnel were found to be more likely to affiliate. Paygrade differences also affected retention in this study. Higher paygrade reservists may be more likely to remain because they have acquired more training and are more familiar with Navy service. The different occupational areas (see Table 4) were examined in relation to retention. Group 3 (medical/dental) was found to have the highest retention. First-year retention was most affected by pay and education level variables. In general,

high paygrades are associated with high retention. Gender has a fairly strong effect in this study with women remaining in the reserves for a longer period of time than men. Marital status for this study had very little impact on retention levels indicating that married life was not significantly impacted by Navy Reserve service. (Ref 15)

Fithian (1988) analyzed retention decisions of male, first-term enlisted Selected Army Reservists. The study found that those who were dissatisfied with in reserve experience areas such as training, supervision/direction received during drill time, and unit morale were less likely to stay in the reserves. Prior service members were found to have higher retention rates than non-prior service members, 1.6% higher in National Guard and 25.3% in the Army Reserve. (Ref 16)

Boykin and Merritt (1979) examined Navy Reserve retention within Readiness Command Region Seven. This study found that nearly all of the reservists planned on staying in the reserves. For example, over half of the reservists questioned gave themselves a 90% chance of remaining in the reserves for an additional year and an 80% chance of staying in until retirement. Married men were more likely to stay in the reserves than non-married men. At the time of the survey, only 9% of the SELRES population in this particular region was female. The two most important reasons members cited as having influenced them to affiliate with the Navy Reserves were drill pay and retirement. (Ref 17)

2. Mobilization

Kirby and Naftel (1998) examined the effect that mobilization has on enlisted reservists, particularly after

Operation Desert Shield/Storm. Reserve pay had a positive and significant effect on retention for non-prior and prior service reservists. Retirement benefits were important to both male and female reservists. (Ref 18)

3. Continuation

Kominiak (1997) studied the reasons why Army reservists stop participating in drills. The top reasons noted by the Army reservists involved training and leadership. Reservists noted that they felt leadership was lacking when problems needed to be resolved, and after the reservist had left the unit, little or no attempt was made to try and gain them back into a drilling status. (Ref 19)

4. NRF Unit Retention

Shiells and Reese (1988) examined retention between Navy Reserve Force (NRF) ship units and non-NRF ship units. Regarding differences in unit retention, during FY1986 and FY1987 42.3% of NRF unit SELRES left their units each year. Personnel transferred to non-NRF units at the rate of 10.7% which gave an overall NRF unit attrition of 31.6%. This compared to an overall SELRES loss rate of 28%. Continuation rates for NRF unit personnel start out at a higher percentage (62.5% for paygrades E1-E2), and then drop to 46.9% for paygrade E4 and increase again to the highest continuation rate in paygrades E7-E9 (72.3%). (Ref 20)

5. Affiliation

Shiells (1986) examined affiliation of Navy veterans with the Navy Reserves. Pay was determined to have a significant and positive impact on Navy veterans affiliating with the Navy Reserves in six of the eleven Navy occupational rating groups. Females and non-caucasians affiliate at a higher level than do males and

caucasian personnel, in some cases females and non-caucasian personnel affiliate at twice the percentage level as caucasian male NAVETS. (Ref 21)

III. DATA, MAKEUP OF RESPONDENTS, METHODOLOGY, MODELS AND VARIABLE SELECTION

A. DATA

1. Survey Description

The data set used for this thesis is based on responses from the 2000-2001 Navy Reserve Career Decisions Survey (hereafter referred to as "survey") administered by the office of Navy Personnel Research, Studies, & Technology in Millington, TN in conjunction with Commander, Navy Reserve Force. Individuals who participated in the survey fell into one of twelve groups as indicated in Table 7.

Table 7: Survey Respondent Numbers and Percentages

Survey Number	Reason for taking survey	Respondent Number	Respondent Percentage
1	Total Force Survey	41757	82.37
2	Accepting promotion/advancement	1033	2.04
3	Re-enlisting	847	1.67
4	Extending	392	0.77
5	Retiring with pay	4191	8.27
6	Retiring without pay	725	1.43
7	Transfer to the IRR	424	0.84
8	Transfer to another Reserve Component	444	0.88
9	Transfer to active-duty Navy	105	0.21
10	High Year Tenure	566	1.12
11	Unsatisfactory Performance	31	0.06
12	Reached Retirement Age (60)	178	0.35

Source: Author, derived from survey data

The survey included a cover letter from Commander, Navy Reserve Force that explained the rationale for the survey and asked all Selected Reservists to participate. The survey was administered during regular drill weekends

at reserve centers across the nation. Participants were limited to members of the Selected Reserve (SELRES) who were in an active drilling status. Additionally, Commander, Navy Reserve Forces sent out an official message to the SELRES encouraging them to take the survey and directing their Commanding Officers or Officers in Charge to allow survey participation during drill time. Response rate was approximately 70 percent. The survey's data set consisted of a total of 50,693 observations (participants) who responded to 138 questions. The data set created for this thesis included only enlisted members, which reduced the total number of observations to 30,889. Variables totaled 92, some of which were subsets of main questions. All of the 128 individuals who did not answer the gender question or any other questions were automatically excluded from the calculations of this thesis. For this thesis, only respondents that fell into the category of "Total Force Survey" were used.

The survey divided the questionnaire items into several different groups; Demographics, Overview, Your Career in the Navy Reserve, Navy Reserve Job/Working Conditions, Personal and Family Life, Navy Reserve Pay and Benefits, Navy Reserve Culture, Leadership in the Navy Reserve, and Other Employment Opportunities. With the exception of the demographic questions, the majority of the questions asked the member to identify how strongly each item influenced him or her to stay in the reserves or leave.

2. Cleaning the Data

Upon receiving the survey data set, several variables had to be organized into useable formats. For instance,

Hospital Corpsman, which is a subset of the "rate" variable, had twenty-eight categories in the original data set. When reorganized, Hospital Corpsman was divided into only nine categories; HM, HMCM HMCS, HMC, HM1, HM2, HM3, HN, and HNAA. Similarly, Construction Mechanic had thirteen categories which were reorganized into seven; CM, CMCS, CMC, CM1, CM2, CM3, and CMCN. Equipment Operator had thirty-five categories that were reorganized into eight; EO, EOCS, EOC, EO1, EO2, EO3, EOCN, and EOCA. Information Technician went from seventeen to seven; IT, ITCS, ITC, IT1, IT2, IT3, ITSN, and ITSA. The survey's "rate" question was a free flowing text. Free-flowing text boxes allowed respondents to enter anything they wanted; thus hundreds of people entered HM, CM, EO, and IT for their rate instead of including their rank, (i.e. IT3 or CE2.) Table 8 shows the rank distribution for the rates of HM, CM, EO, and IT.

Table 8: Rank Distribution Chart for Critical Rates

Rank	HM	CM	EO	IT
E2	3	0	2	1
E3	19	10	22	12
E4	241	45	144	117
E5	319	49	171	258
E6	160	54	152	192
E7	130	17	73	75
E8	10	6	14	6
E9	2	0	0	0
Rate without Rank	1269	146	479	778
TOTAL	**2153**	**327**	**1057**	**1439**

Source: Author, derived from survey data

B. MAKEUP OF RESPONDENTS

1. Gender

Looking at the entire data set of E1-E6 respondents, 24,217 were male and 6,500 were female with 172 missing observations. E1-E6 males made up 78.8% of survey respondents and E1-E6 females made up 21.2% of survey respondents.

2. Rank

a. E1-E5 Enlisted Respondents

In the category of E1-E5 personnel there were 22,311 respondents. Male respondents totaled 17,065 and 5,118 were female.

b. E6 Enlisted Respondents

E6 personnel totaled 8,578 respondents. Among the E6 respondents, 7,152 were male and 1,382 were female.

C. E1-E5/E6 years of Experience

Table 9 shows how many years of service E1-E5 and E6 members have accumulated at various year levels with the lower ranking members having less military time, as would be expected. For example, the percent of E6 members with only one year of SELRES service is only 2.99% while E1-E5 members with only one year of SELRES service are 15.55% of the E1-E5 respondents.

Table 9: E1-E5/E6 comparison accumulated Years as SELRES and accumulated Total Years of Service

	% year 1	% year 2	% year 3	% year 4	% year 5	% year 10	% year 15	% year 20
E1-E5								
Years as SELRES	15.55	26.85	37.66	46.94	53.76	81.29	95.94	99.76
Total Years of Service	4.37	7.77	12.54	20.02	26.06	61.07	87.77	99
E6								
Years as SELRES	2.99	6.83	9.82	14.23	18.05	44.29	80.46	97.7
Total Years of Service	0.12	0.17	0.48	1	1.27	9.91	41.89	87.85

Source: Author, derived from survey data

C. CHI-SQUARE METHODOLOGY

The Chi-square test for a contingency table tests the null hypothesis of independence between two variables. “Chi-square can be used to summarize the intersections of focus and associated variables and understand the relationship (if any) between those variables.” (Ref 22) The Chi-square methodology cross-tabulates the variables in row and column positions and produces corresponding percentages. The null hypothesis of a Chi-square test states that the row and column variables are independent of or not related to each other. For example, with a row variable of “gender” and column variable of “retirement intent,” the null hypothesis would state that gender is not related to retirement intentions; males and females plan on retiring at approximately the same percentage rate. The alternative hypothesis states that the row and column variables are not independent of each other. Using the same example, the alternate hypothesis would state that gender is related to retirement intentions; being male or female makes a difference regarding retirement intentions. Each row and column binary variable takes no additional variables into account, as would be the case in multiple regression.

The Chi-square test will yield a probability value or “p-value” that determines if the null hypothesis should not be believed (rejected) or be believed (not rejected.) Because the tests being conducted are from a sample of the entire SELRES population, we can never really be 100% sure that the test results are accurate; there are many SELRES that didn’t take the survey making the results from this survey a guess. This is why the null hypothesis is said to

be “rejected”, but never said to be “accepted,” as “acceptance” infers 100% validity of the test results. If the p-value is very small (normally accepted limits are 10%, 5%, or 1%) the null hypothesis will be rejected in favor of the alternate hypothesis.

The statistics calculated for this thesis were constructed through the use of the Chi-square tests on 2X2 contingency tables. In order to use Chi-square tests for 2X2 contingency tables, all variables are recoded as dummy or binary variables. Dummy variables are constructed having the value of 1 representing the presence of the characteristic being studied and a zero representing the absence of the characteristic. For example, gender is measured using a variable that identifies male = 1 and “non-male”, or female, = 0.

D. MODELS AND VARIABLE SELECTION

1. Focus Variable: Retirement Intent

The question that asked about the participant’s current career intentions along with the statement “I intend to stay in the Navy Reserves until I am eligible to retire” became the focus variable for this thesis and is used in all cross-tabulation equations and Chi-square tests. Chi-square and cross-tabulation equations are utilized in order to examine the significance of each associated variable in relation to the focus variable. This retirement variable created to represent career intentions was labeled “yes_retire” and is in binary form. The retirement variable came from a career intention question that had six possible responses. Table 10 displays the six possible responses along with respondent numbers and percentages for each question.

Table 10: Current Career Intention Responses

Question #	Question: What are your current career intentions?	Response #	Response %
1	I intend to stay in the Navy Reserves until I am eligible to retire	15709	74.09
2	I intend to stay in the active-duty Navy until I am eligible to retire	352	1.66
3	I intend to stay in one of the other services until I am eligible to retire	927	4.37
4	I intend to stay in the service 2 or more years	2802	13.22
5	I intend to stay less than 2 years and I will not be retirement eligible	824	3.89
6	I plan to leave as soon as possible and not join any other service	589	2.78

Source: Author, derived from survey data

Table 11 describes the characteristics of the dependent variable.

Table 11: Focus Variable, Retirement intention, used in all Chi-square Cross-Tabulations

Variable description	Variable name	Variable type	Range
Retention until retirement eligible	yes_retire	binary	= 1 if member plans to stay in Navy Reserves until retirement eligible = 0 if otherwise

Source: Author, derived from survey data

Table 12 shows the percent distribution for the categories of E1-E5 and E6 and the yes_retire variable.

Table 12: E1-E5/E6 and yes_retire variable

	Yes retire	*No retire*
E1-E5	70.41	29.59
E6	86.51	13.49

Source: Author, derived from survey data

2. Associated Variables

Associated variables are those that are expected to be related to the dependent variable. Associated variables fall into one of four categories; demographic and military

background, unit type, rate, or Reserve Experience. A description of each associated variable follows along with a hypothesized relationship to the focus variable.

a. Demographic and Military Background Variables

Demographic variables are those that describe the personal characteristics of the respondents. This thesis analyzes two demographic variables, gender and marital status. Two military background variables are also analyzed, paygrade and years of service (Non Prior Service).

The variable "gender" refers to being male or female. The hypothesized relationship for this variable is that retirement intent will be dependent on gender. By an overwhelming percent, males are the majority and females are the minority in all military branches. Males and females may have different responsibilities in their civilian lives and think differently about the reserves. Males may find the reserves to be more appealing than do females because military service is a male dominated occupation in many cases requiring higher levels of physical strength due to its arduous nature. This may be particularly true in rates that require heavy lifting or are more physically demanding. Therefore, being either male or female will make a difference in their decision to stay in the Navy Reserves until retirement eligible.

"Marital status" reflects the categories of being married, single, divorced, legally separated, or widowed. The hypothesized relationship for these variables is that retirement intention will be dependent on marital status. It is predicted that being married will result in a higher

percentage of respondents that intend to retire in the Navy Reserves. This may be due to greater responsibilities of married members; they have a spouse and may have children to think of when considering required household income.

Available responses for the variable “paygrade” included E1, E2, E3, E4, E5, or E6. The letter “E” signifies that the member is enlisted versus being an officer and together with the attached number, E1-E6 corresponds to a military member’s rank that helps to determine their pay. Within each rank are steps or years of service further determining pay amounts; years of service will be considered as a separate variable. The hypothesized relationship for these variables is that retirement intention will be dependent on paygrade. Paygrade is of course, associated with varying size of paychecks. As members progress to higher paygrades, their paychecks also get progressively larger. A larger paycheck may be more likely to entice the member to stay in the reserves than a smaller paycheck, thus reaching retirement becomes a greater possibility.

The variable for “Total Years of Service Completed” was originally coded in text format and had to be recoded into numeric format. “Total Years of Service Completed” indicates the total amount of years the respondent has completed, a combination of any active duty service and reserve service. The variable for “Years of SELRES Service Completed” was also originally coded in text format and had to be recoded into numeric format. “Years of SELRES Service Completed” reflects the total years completed as an actively drilling Selected Reservist.

"Years of SELRES Service Completed" variable was then subtracted from the "Total Years of Service" variable and those observations for which the difference between the two variables is less than 1.5 (years) are considered to be "Non-Prior Service (NPS)." In other words if [(Total Years of Service Completed) – (Years of SELRES Service Completed)] **<** 1.5 then NPS = 1; else NPS = 0. When calculating the above equation, "1.5" years refers to the amount of time spent on active duty. For the purpose of this thesis, members must have completed greater than one and one half years of active duty service to be considered "prior service". For example, a member who joined the Navy but never finished boot camp, was processed out of the Navy, and joined the Navy Reserve is considered non-prior service due to his or her active duty time being less than one and one half years. "Non-Prior Service" is the term associated with members of the Non-Prior Service Accession Course (NPSAC). NPSAC is the program that allows members to come into the Navy Reserve without prior active duty experience. They are chosen for various rates based on their civilian experience. For example, a member who has civilian construction equipment experience may be chosen for the rate of Equipment Operator and will become a Seabee attached to a construction battalion. NPS is the second military background variable. The hypothesized relationship between NPS and the focus variable is that the focus variable will be dependent on NPS. A study that tests a similar hypothesis is Kostiuk, Follmann, and Shiells (1988) in which they compare NAVETs to Advanced Paygrade (APG)/Other Service (OS) members. APG was a non-prior service Navy Reserve program phased out and replaced with NPSAC (a program similar in content to APG.) Table 13

shows 1988 continuation rates for years one through four for NAVETS and APG/OS.

Table 13: Continuation rates for NAVET and APG/OS members

Years of Service	NAVET	APG/OS
1	62.95	82.73
2	69.69	77.42
3	75.35	78.43
4	72.54	68.76

Source: Adapted from Kostiuk, Follman, and Shiells (1988) Table 7

According to Table 13, Kostiuk et al. (1988) found that APG/OS members remained in the Navy Reserves throughout their first year at a rate of 82.73% compared to NAVET continuation rates of only 62.95%. Table 13 shows that in 1988 APG/OS members had a higher continuation rate than NAVETS throughout year three. By the end of year four NAVETs were at a continuation rate of 72.54% with APG/OS members slipping down to 68.76%.

Between 1988 and 2005, retention has changed for non-prior service members. Currently NPSAC has an annual attrition rate of approximately 26%. Recently, the NPSAC program has been closely examined for Return on Investment (ROI). E4 Navy Reserve SELRES members who have reached fourteen years of service are being processing out of the reserves if they have not been promoted to E5. This practice is called High Year Tenure (HYT). The ROI study compared NPSAC members to E4 HYT SELRES. It suggests that there are several reasons why NPSAC is not a profitable program and that changing the E4 HYT rule to allow continued service past the fourteen year mark would be of

great value to the Navy Reserve. Due to their required training timeline (governed by Congress), NPSAC members are not mobilization assets for approximately three years. Due to their extensive prior service training, NAVETS and OSVETS are mobilization ready within 2 days of Navy Reserve affiliation. As the study points out, E4 HYT members are currently affiliated with the Navy Reserve and are also mobilization ready. The hypothesized relationship for prior service status personnel and retention intention is that retention intention is dependent on prior service status. (Ref 23)

b. Unit Type Variables

In the Navy Reserve, a large percentage of SELRES serve in one of three different types of units. Table 14 shows populations of these differing unit types relative to E1-E5 and E6 rate categories. The hypothesized relationship for unit type and retention intention is that retention intention will be dependent on unit type.

Table 14: E1-E5/E6 Unit Type Populations

E1-E5	*Personnel #*	*E6*	*Personnel #*
Aviation Unit	3046	Aviation Unit	1375
Reserve Center Unit	18436	Reserve Center Unit	6929
Shipboard Unit	297	Shipboard Unit	108

Source: Author, derived from survey data

The variable “unit_air” was created to represent an aviation unit. An aviation unit, for example, may be attached to a helicopter squadron in Coronado, California or an F-18 squadron in Virginia Beach, Virginia. Reserve drill time can be extremely hectic for members who are

attached to aviation units and aviation units are many times mobile which means the SELRES can be called upon to complete extra hours, above and beyond the required amount. For members who are married, with a full time civilian job, this schedule may be difficult to maintain thus increasing attrition compared to other units.

The variable “unit_center” was created to represent a reserve center unit or a readiness command unit. A unit attached to a reserve center or readiness command may, for example, conduct their drill weekends in Dubuque, Iowa, Phoenix, Arizona, or San Diego, California. The hypothesized relationship is that the focus variable of retirement intention will be dependent on “unit_center”. Although drilling at a reserve center may have a lower optempo, depending on availability of training equipment and assignments, SELRES may feel content to drill there, limiting their travel time and level of arduous duty (as compared to shipboard and aviation unit work.)

The variable “unit_ship” was created to represent a shipboard unit. A shipboard unit, for example may be attached to a minesweeper in Ingleside, Texas or an aircraft carrier in Everett, Washington. Shiells and Reese (1988) studied unit retention and the differences between Navy Reserve Force (NRF) ship units and Non-NRF units. They report that “[r]esults showed that in fiscal years 1986 and 1987, 42.3 percent of the NRF personnel inventory left NRF units each year. This compares to an annual loss rate of 28 percent for all SELRES personnel.” (Ref 20). Therefore the hypothesized relationship is that retention intention will be dependent on “unit_ship”.

c. Rate Variables

"Rate" is the job that a particular Navy Reservist holds and for which he or she has been trained. In this thesis there are four "critical" rates that are studied. "Critical" refers to the manning level of each particular rate. To be critical, a rate is considered to be undermanned and in critical need of additional people to fill the job vacancies.

The following four rates are studied in this thesis; Hospital Corpsman, Construction Mechanic, Equipment Operator, and Information Technician. All four rates are subsets of the variable of the survey's "rate" question. In order to use these rates in equations for this thesis, a rank inclusive variable was created for each of these four critical rates. For example, for the rate of Hospital Corpsman, the variable "total_hm" compiles all of the HM respondents within the E1-E6 ranks. The same procedure was used for Construction Mechanic that became "total_cm", Equipment Operator that became "total_eo" and Information Technician that became "total_it". After these four variables were created, they were then combined into one final critical rate variable, "crit_rate".

It is hypothesized that retirement intention and "crit_rate" are related. Those in understaffed rates may experience greater stress in completing their reserve duties than those in other rates.

d. Reserve Experience Variables

Reserve experience as a category contains those items that are related to intrinsic and extrinsic motivation. "Intrinsic motivation" refers to one's internal or innate drive to accomplish. "Extrinsic

motivation" refers to external factors that influence one's desire toward higher performance. Included in this analysis are responses to six reserve experience questionnaire items. If the aspect of reserve experience was considered by the respondent to influence him or her to stay in the reserves (slightly, moderately, or strongly) then it was coded as a one and as a zero otherwise. Experience-type variables are important to examine when studying job retention. People are motivated by different types of issues when considering whether or not they want to stay in a certain job. Pay, stress level, travel time to work and work experiences are just some of the factors people will consider with regard to their job retention.

If the "quality of training received at your drill location" was evaluated as an influence to stay, the variable "high_training" took on a value of one, and otherwise a value of zero. The hypothesized relationship between these variables is that retention intent is dependent on quality of training. Boykin and Merritt (1979) studied how strongly training is tied to retention in the Navy Reserves. They stated that "satisfaction with training appears about two-thirds of the way down the list..." and "[a]lthough a large number of reservists don't find the training and equipment satisfying, these feelings aren't sufficiently strong to discourage reenlistment." Although training was not found to be high on the list of importance in 1979, many reservists feel that training can be the highlight of the reserve weekend. On-the-job training can be the most effective way of preparing a reservist for future field exercises or mobilizations. For example, a Hospital Corpsman will become more proficient in

conducting blood draws when he or she is afforded actual hands on training time during drill weekend. A Seabee equipment operator would probably love nothing better during drill weekend than to operate the machinery on which he or she is trained. It is hypothesized that reservists that feel as though they were provided challenging and interesting training during drill weekend will have higher retention rates.

The variable “high_recognition” represents the perceived level of recognition received by the respondent for his or her Navy Reserve accomplishments as an influence to stay. The hypothesized relationship between “high_recognition” and the focus variable is that retention intention is dependent on recognition. In general, people enjoy recognition for a job well done. It is hypothesized that proper accomplishment recognition is related to higher retention rates.

The variable “family_impact” represents the impact that being in the reserves has on the respondent’s family as an influence to stay. This survey was completed prior to September 11, 2001, the day terrorists struck in our nation’s homeland. In addition to the respondent indicating how strongly the impact of being in the reserves is on his or her family, the family impact question asked participants to check one of the following: 1) Overall, being in the Reserves has had a positive impact on my family, or 2) Overall, being in the Reserves has had a negative impact on my family. Additionally, the family impact question asked participants to check as many as applied to the following four statements: 1) Being in the Reserves reduces the time I spend with my family, 2) Being

in the Reserves conflicts with my spouse's job, 3) Being in the Reserves places additional stress on my spouse, and 4) Being in the Reserves increases the costs of childcare due to weekend drills. The hypothesized relationship between family impact and the focus variable is that retention intent is dependent on family impact. Before 9/11, mobilizations seldom occurred; participants rarely felt that the Navy Reserves impacted their family greatly.

The variable "high_civ_job" was created to represent the question asking about impact the Navy Reserves has had on the respondent's civilian job as an influence to stay. Kirby & Naftel (1998) cited a 1988 study by Geleta, Moll, Morstein, and Paska that found that approximately one-third of the respondents (3,000 Army National Guard members) who said they planned to stay in the Guard would get out if their Guard drill requirements increased. This change of heart was due to the impact on civilian jobs and family obligations. Retention intent has a hypothesized relationship of being dependent on "High_civ_job".

Educational benefits are found in several surveys to be quite important to reservists. The survey question regarding educational benefits asks how strongly the benefits influence respondents to stay in or leave the Navy Reserve. The variable "high_educ_bennies" was created to represent the question asking about the impact the educational benefits have had on the respondent's intent to retire in the Navy Reserve. The hypothesized relationship between these variables is that retention intent is dependent on "educational benefits". Kirby, Grissmer, Williamson, & Naftel (1997) studied two previous surveys,

1986 and 1992. They found that enlisted members cited educational benefits to be a major contributor of desire to reenlist 16% of the time in the 1988 survey with an increase to 28% of the time in the 1992 survey.

The variable “high_COXO_leadership” represents leadership exhibited by the respondent’s Commanding Officer and Executive Officer (CO/XO) as an influence to stay. This survey question asks about the quality of leadership at the senior officer level (CO/XO) and how strongly it influences respondents to stay in or leave the Navy Reserve. The hypothesized relationship between these variables is that retention intent is dependent on the created variable “high_COXO_leadership”. Commanding Officers and Executive Officers play a vital role in retention of military members. They set the tone for the unit; morale can be high or low depending on the attitude of the unit leadership.

IV. RESULTS OF CHI-SQUARE ANALYSIS

A. DEMOGRAPHIC VARIABLES

1. Male/Female

Table 15 reveals the percentage distribution between males and females for E1-E5 and E6 respondents cross-tabulated with the yes_retire variable. Male respondents in the E1-E5 category plan on staying in the reserves until retirement eligible 71.23% of the time and 28.77% plan on getting out before becoming retirement eligible. While 67.73% of E1-E5 females plan on retiring in the Navy Reserve, 32.27% plan on getting out prior to being retirement eligible. Regarding E1-E5's the Chi-square p-value is significant at the .01 level. The null hypothesis that there is no difference between being an E1-E5 male or female with regard to the desire to stay until retirement eligible is rejected at the 1% level and it can be concluded that the decision to stay in the reserves until retirement eligible is dependent on gender.

Table 15: E1-E5/E6 Male/Female and yes_retire variable

E1-E5	*Yes retire*	*No retire*	P-value
Male	71.23	28.77	<.0001
Female	67.73	32.27	
E6	*Yes retire*	*No retire*	P-value
Male	86.79	13.21	0.0951
Female	85.13	14.87	

Source: Author, derived from survey data

For the rank category of E6, male respondents plan on staying in the reserves until retirement eligible 86.79% of the time and 13.21% plan on getting out before retirement

eligible as shown in Table 15. While 85.13% of E6 females plan on retiring in the Navy Reserve, only 14.87% plan on getting out prior to being retirement eligible. The chi-square statistic for this test is significant at the .10 level. The null hypothesis is rejected at the 10% level, indicating that the decision to stay in the reserves until retirement eligible is weakly dependent on gender for those in rank E6. However, the null hypothesis of no relationship would not be rejected at the 5% and 1% levels. It can also be noted that E6 females plan on retiring at a rate 17.4% higher than do E1-E5 females. Similarly, E6 males plan to retire at a 15.56% higher rate than do E1-E5 males.

2. Marital Status

The "married" variable was created with a value of 1 for married members and a value of 0 for non-married members. In this survey non-married members include single (never married,) legally separated, divorced and widowed.

Table 16 indicates that 73.39% of E1-E5 married members plan on retiring from the Navy Reserve while 26.61% have no retirement plans. E1-E5 non-married members plan on retiring at the lower level of 66.6% while 33.4% have no retirement plans. These differences are very significant at the .01 level. Looking at E6 married members, 87.59% say they plan on retiring in the Navy Reserve while 83.85% of E6 non-married members plan on retiring in the Navy Reserves. With a p-value of <.0001, these differences are significant at the .01 level. For the E1-E5 group and the E6 group, planning to stay to retirement is strongly related to marital status.

Table 16: E1-E5/E6 Married/Non-married and yes_retire variable

E1-E5	*Yes retire*	*No retire*	P-value
Married	73.39	26.61	<.0001
Non-Married	66.6	33.4	
E6	*Yes retire*	*No retire*	P-value
Married	87.59	12.41	<.0001
Non-Married	83.85	16.15	

Source: Author, derived from survey data

The relationship of marital status and planned retention may differ for men and women. To investigate this possibility another set of cross-tabulations was constructed to separate the gender inclusive married/non-married tables into male and female tables in order to analyze the relationship between planned retention to retirement and marital status while controlling for gender. Table 17 shows that for both E1-E5 males and females and for E6 males, the association between plans to stay to retirement and marital status is significant at the .01 level. Interestingly, the chi-square statistic for the female E6 cross-tabulation of marital status and planned retention has a p-value of .1043 which is not significant even at the .10 level, though it is nearly significant at this level. The null hypothesis that marital status and planned retention are independent can be rejected for E1-E5 males and females and for E-6 males, but for E-6 females, there is not a significant difference between married and non-married members with regard to their plans for Navy Reserve retirement. Married members (except for female E-6 reservists) consistently have higher planned rates of retirement from the Navy Reserves. This is consistent with previous military retirement studies.

Table 17: E1-E5/E6 Male/Female, Married/Non-married and yes-retire variable

E1-E5 Male	*Yes retire*	*No retire*	P-value
Married	74.23	25.77	<.0001
Non-Married	66.78	33.22	
E1-E5 Female	*Yes retire*	*No retire*	P-value
Married	69.7	30.3	0.0066
Non-Married	66.17	33.83	
E6 Male	*Yes retire*	*No retire*	P-value
Married	87.74	12.26	<.0001
Non-Married	83.99	16.01	
E6 Female	*Yes retire*	*No retire*	P-value
Married	86.51	13.49	0.1043
Non-Married	83.44	16.56	

Source: Author, derived from survey data

3. Prior Service Status

Table 18 shows that E1-E5 NPS respondents plan on retiring at a rate of 68.71% and 31.29% have no plans to retire from the Navy Reserve. Prior Service respondents plan to retire at a higher rate of 74.00% and 26.00% have no plans to retire from the Navy Reserve. The p-value for this Chi-square statistic for this cross-tabulation is highly significant at the .01 level. E6 NPS respondents indicate an 86.56% retirement intention rate with only 13.44% having no similar retirement plans. Prior service E6 respondents indicate a slightly higher retirement intention rate than NPS respondents at 87.91%. For this E6 category, the chi-square statistic is not significant at any of the usual levels. Overall, E6 respondents are more likely to stay in the Navy Reserve until retirement eligible. This could be due to larger paychecks, having more years in the service and thus being closer to retirement, and/or the higher prestige associated with being a first class petty officer. For the E1-E5 category,

the intent to retire from the Navy Reserve is significantly dependent on being NPS or prior service. For E6 respondents, the intent to retire from the Navy Reserve does not depend on their NPS/prior service status.

Table 18: NPS/Prior Service and yes_retire variable

E1-E5	*Yes retire*	*No retire*	P-value
Non-Prior Service	68.71	31.29	<.0001
Prior Service	74.00	26.00	
E6	*Yes retire*	*No retire*	P-value
Non-Prior Service	86.56	13.44	0.139
Prior Service	87.91	12.09	

Source: Author, derived from survey data

B. UNIT TYPE VARIABLES

SELRES are normally attached to one of three different types of units; Aviation units, shipboard units, or units attached to a reserve center or readiness command. Table 19 shows retirement intention rates categorically by E1-E5/E6, and unit types.

Table 19: E1-E5/E6 Unit Type with yes_retire variable

E1-E5	*Yes retire*	*No retire*	P-value
Aviation Unit	69.53	30.47	0.2547
Non-Aviation Unit	70.55	29.45	
E6	*Yes retire*	*No retire*	P-value
Aviation Unit	85.45	14.55	0.2103
Non-Aviation Unit	86.71	13.29	
E1-E5	*Yes retire*	*No retire*	P-value
Reserve Center Unit	71.01	28.99	<.0001
Non- Reserve Center Unit	67.54	32.46	
E6	*Yes retire*	*No retire*	P-value
Reserve Center Unit	87.27	12.73	<.0001
Non- Reserve Center Unit	83.32	16.68	
E1-E5	*Yes retire*	*No retire*	P-value
Shipboard unit	74.07	25.93	0.1636
Non-shipboard unit	70.36	29.64	
E6	*Yes retire*	*No retire*	P-value
Shipboard unit	84.26	15.74	0.4904
Non-shipboard unit	86.54	13.46	

Source: Author, derived from survey data set

1. Aviation Unit

E1-E5 respondents attached to Navy Reserve aviation units indicated they plan to retire at a 69.53% rate. E1-E5 respondents not attached to aviation units plan to retire at a 70.55% rate. The chi-square statistic for this cross-tabulation is .2547 which is not significant at any of the usual levels. For E1-E5 aviation unit respondents, retirement intent is not dependent on whether the member was in an aviation unit or a non-aviation unit.

E6 respondents attached to Navy Reserve aviation units indicated they plan to retire at an 85.45% rate. E6 respondents not attached to aviation units plan to retire at an 86.71% rate. The chi-square statistic for this cross-tabulation is .2103 which is not significant at any

of the usual levels. For E6 aviation unit respondents, retirement intent is not dependent on whether the member is in an aviation unit or a non-aviation unit.

2. Reserve Center/Readiness Command Unit

E1-E5 respondents attached to reserve center/readiness command units indicated they plan to retire at a 71.01% rate. E1-E5 respondents not attached to reserve center/readiness command units plan to retire at a 67.54% rate. The chi-square statistic for this cross-tabulation is <.0001 which is significant at the .01 level. For E1-E5 reserve center/readiness command unit respondents, retirement intent is dependent on whether the member is in a reserve center/readiness command unit or a non-reserve center/readiness/command unit.

E6 respondents attached to reserve center/readiness command units indicated they plan to retire at an 87.27% rate. E6 respondents not attached to reserve center/readiness command units plan to retire at an 83.32% rate. The chi-square statistic for this cross-tabulation is <.0001 which is significant at the .01 level. For E6 reserve center/readiness command unit respondents, retirement intent is dependent on whether the member is in a reserve center/readiness command unit or a non-reserve center/readiness command unit.

3. Shipboard Unit

E1-E5 respondents attached to Navy Reserve shipboard units indicated they plan to retire at a 74.07% rate. E1-E5 respondents not attached to shipboard units plan to retire at a 70.36% rate. The chi-square statistic for this cross-tabulation is .1636 which is not significant at any of the usual levels. For E1-E5 shipboard unit respondents,

retirement intent is not dependent on whether the member is in a shipboard unit or a non-shipboard unit.

E6 respondents attached to Navy Reserve shipboard units indicated they plan to retire at an 84.26% rate. E6 respondents not attached to shipboard units plan to retire at an 86.54% rate. The chi-square statistic for this cross-tabulation is .4904 which is not significant at any of the usual levels. For E6 shipboard unit respondents, retirement intent is not dependent on whether the member is in a shipboard unit or a non-shipboard unit.

C. CRITICAL RATE VARIABLES

1. This thesis examines four Navy Reserve critical rates of Hospital Corpsman, Construction Mechanic, Equipment Operator, and Information Technician (a combination of DP and RM). According to Kostiuk et al. (1988) the following continuation percents signified the survival rates for each rate group after the first year of Navy Reserve enlistment. Rate group Medical which contained Hospital Corpsman had the highest survival rate after one year at 61.5%. Information Technician which is an average of Communications/Intelligence group at 54.3% (containing Radioman) and Administrative/clerical group at 55.2% (containing Data Processor) had a survival rate of 54.75%. Rate group Mechanical equipment repair-surface containing Construction Mechanic, had a one year survival rate of 51.4%. Lastly, for this thesis, rate group Craftsmen containing Equipment Operator, had a survival rate of 50.4%. (Ref 14)

Hospital Corpsman, Construction Mechanic, Equipment Operator, and Information Technician were all combined into one critical rate variable, “crit_rate”. Table 20 shows

whether or not the respondent was in one of these critical rates by the focus variable of retirement intent for E1-E5 and E6.

Table 20: E1-E5/E6, Critical/Non-Critical Rate with yes_retire variable

E1-E5	*Yes retire*	*No retire*	P-value
Critical Rate	67.40	32.60	<.0001
Non-Critical Rate	72.20	27.80	
E6			
Critical Rate	87.31	12.69	0.8747
Non-Critical Rate	87.15	12.85	

Source: Author, derived from survey data

E1-E5 respondents in one of the four critical rates plan to stay in the Navy Reserve until retirement eligible at a 67.40% rate while 32.60% plan to get out prior to attaining retirement eligibility. Those E1-E5 respondents who are not in a critical rate plan to stay in the Navy Reserve until retirement eligible at a 72.20% rate while 27.80% plan to get out prior to attaining retirement eligibility. The p-value for the chi-square statistic for this cross-tabulation is <.0001 and is very significant (.01 level). For this category of E1-E5 critical rate respondents, retirement intent is clearly dependent on whether or not the member is in a critical rate.

E6 respondents in one of the four critical rates plan to stay in the Navy Reserve until retirement eligible at an 87.31% rate while 12.69% plan to get out prior to attaining retirement eligibility. Those E6 respondents who are not in a critical rate plan to stay in the Navy Reserve until retirement eligible at an 87.15% rate while 12.85% plan to

get out prior to attaining retirement eligibility. The chi-square statistic for this cross-tabulation is .8747 and is not significant at any of the usual levels. For E6 respondents, retirement intent is independent of whether or not the member is in a critical rate.

D. RESERVE EXPERIENCE VARIABLES

The effects of reserve experience on reservists' plans to stay to retirement are presented in this section. The aspects of the reserve experience investigated include: training, recognition, family impact, civilian job impact, educational benefits, and CO/XO leadership.

1. Quality of Training

Table 21 refers to responses to a questionnaire item about the influence of the quality of training received at the respondent's drill location. Cross-tabulations are presented by paygrade category.

Table 21: Training and yes_retire variable

E1-E5	*Yes retire*	*No retire*	P-value
Ranked training high	77.77	22.23	<.0001
Did not rank training high	64.59	35.41	
E6	*Yes retire*	*No retire*	P-value
Ranked training high	89.52	10.48	<.0001
Did not rank training high	84.21	15.79	

Source: Author, derived from survey data

E1-E5 respondents indicated that the quality of training they receive at their drill sites influenced them to remain in the Navy Reserve until retirement eligible at a rate of 77.77% as shown in Table 21. E1-E5 respondents who did not rank their training high plan to retire at a rate of only 64.59%. Those E6 members who felt their

training was high plan on Navy Reserve retirement at a rate of 89.52%. Those E6 respondents whom did not rank their training high, plan on retiring at a lower rate of 84.21%. Among reservists in both E1-E5 and E6 categories, the chi-square statistics are significant at the .01 level, which leads to the conclusion that for E1-E6 respondents retirement intent is dependent on perceptions of the importance of the quality of training received at their drill site.

2. Accomplishment Recognition

Recognition for a job well done seems to be important to just about every worker. Table 22 examines Navy Reserve members and their plans to remain in the Navy Reserves until retirement eligible based on the importance of level of recognition for their accomplishments.

Table 22: Recognition and yes_retire variable

E1-E5	*Yes retire*	*No retire*	P-value
High level recognition	78.10	21.90	<.0001
Not high level recognition	64.10	35.90	
E6	*Yes retire*	*No retire*	P-value
High level recognition	90.28	9.72	<.0001
Not high level recognition	83.08	16.92	

Source: Author, derived from survey data

E1-E5 respondents indicated they planned to stay in the Navy Reserve until retirement eligible at a rate of 78.10% based on the influence of the level of recognition for their accomplishments. Those in the category of E1-E5 specified a retirement intent rate of only 64.10% if they rated their level of recognition for their accomplishments as influential. The p-value for the chi-square statistic

for this cross-tabulation is <.0001 and is very highly significant (.01 level). E6 survey participants who indicated a high level of recognition had a retirement intent rate of 90.28%, while those E6 members without a high recognition level tallied an 83.08% retirement intent rate. The p-value for the chi-square statistic for this category is <.0001 and is very highly significant (.01 level). Retirement intent is clearly dependent on the level of accomplishment recognition for respondents in the ranks of E1-E6.

3. Family Impact

Table 23 examines the importance of the impact that is felt on family with regard to Navy Reserve service.

Table 23: Family impact and yes_retire variable

E1-E5	*Yes retire*	*No retire*	P-value
Good family impact	80.50	19.50	<.0001
Not good family impact	64.70	35.30	
E6	*Yes retire*	*No retire*	P-value
Good family impact	91.32	8.68	<.0001
Not good family impact	84.32	15.68	

Source: Author, derived from the survey data

E1-E5 respondents who felt the family impact of being in the Navy Reserve influenced them to stay, had a retirement intent rate of 80.50%. Those E1-E5 respondents who did not feel the family impact of being in the Navy Reserve influenced them to stay, had a retirement intent rate of only 64.70%. The chi-square statistic for this cross-tabulation has a p-value of <.0001, highly significant at the .01 level. E6 respondents indicating that the importance of family impact from the Navy Reserve

was influential had a retirement intent rate of 91.32%, while E6 members who did not feel that the Navy Reserve impact on the family was influential, had a retirement intent rate of 84.32%. The chi-square statistic for this cross-tabulation has a p-value of <.0001, and is significant at all the usual levels. For the inclusive category of E1-E6, retirement intent is clearly dependent on the influence of the level of family impact from being in the reserves.

4. Civilian Job Impact

Table 24 shows the relationship of the importance of the impact that being in the Navy Reserve has on the respondent's civilian job to the reservist's retirement intent.

Table 24: Civilian job impact and yes_retire variable

E1-E5	*Yes retire*	*No retire*	P-value
High civilian job	79.88	20.12	<.0001
Not high civilian job	66.72	33.28	
E6	*Yes retire*	*No retire*	P-value
High civilian job	91.37	8.63	<.0001
Not high civilian job	84.90	15.10	

Source: Author, derived from survey data

The planned retention rate for E1-E5 respondents who indicated that the level of impact the Navy Reserve had on their civilian job had influenced them to stay planned to stay at a rate of 79.88%. The proportion of those E1-E5 respondents that indicated this impact level did not influence them to stay planned to stay at a rate of 66.72%. The p-value for the chi-square statistic for this cross-tabulation is <.0001 and significant at all the usual

levels. Those E6 respondents who indicated that this level of impact the Navy Reserve had on their civilian job had influenced them to stay planned to stay at a rate of 91.37%. Those E6 respondents that indicated the impact level did not influence them to stay planned to stay at a rate of 84.90%. The p-value for the chi-square statistic for this cross-tabulation is <.0001 which is highly significant (.01 level). For the inclusive rank category of E1-E6, retirement intent is clearly dependent on the influence of the level of impact the Navy Reserve has on their civilian job.

5. Educational Benefits

Respondents indicated how strongly educational benefits influenced them to leave or stay in the Navy Reserve. Table 25 shows retirement intent rates for the survey's E1-E6 participants by the influence of educational benefits.

Table 25: Educational benefits and yes_retire variable

E1-E5	*Yes retire*	*No retire*	P-value
High educational benefits	77.15	22.85	<.0001
Not high educational benefits	64.21	35.79	
E6	*Yes retire*	*No retire*	P-value
High educational benefits	91.01	8.99	<.0001
Not high educational benefits	83.68	16.32	

Source: Author, derived from survey data

E1-E5 respondents who indicated educational benefits influenced them to stay until retirement eligible planned to stay to retirement at a rate of 77.15%. E1-E5 respondents, who indicated educational benefits did not influence them to stay, indicated that they planned to stay

to retirement at a rate of 64.21%. The chi-square statistic for this cross-tabulation is <.0001 and is very significant (.01 level). E6 respondents who indicated that educational benefits influenced them to stay planned to stay until retirement eligible at a rate of 91.01%. E6 respondents, who indicated educational benefits did not influence them to stay, indicated that they planned to stay to retirement at a rate of 83.68%. The p-value for the chi-square statistic for this cross-tabulation is <.0001 and is very significant (.01 level). For the inclusive category of E1-E6, retirement intent is clearly dependent on the influence of educational benefits.

6. Senior Leadership (CO/XO)

Respondents indicated how strongly the quality of leadership at the senior level (CO/XO) influenced them to leave or stay in the Navy Reserve. Table 26 shows retirement intent rates for survey's E1-E6 participants by the influence of quality of leadership.

Table 26: CO/XO leadership and yes_retire variable

E1-E5	*Yes retire*	*No retire*	P-value
High CO/XO leadership	77.29	22.71	<.0001
Not high CO/XO leadership	61.08	38.92	
E6	*Yes retire*	*No retire*	P-value
High CO/XO leadership	91.31	8.69	<.0001
Not high CO/XO leadership	79.45	20.55	

Source: Author, derived from survey data

E1-E5 respondents who felt the quality of leadership from the senior officer level influenced them to stay in the Navy Reserve indicated a planned retirement intent rate of 77.29%. E1-E5 respondents who felt the quality of

senior leadership did not influence them to stay, indicated a considerably lower planned retirement intent rate of 61.08%. This is a difference in plans to retire of 16.21%. The chi-square statistic for this cross-tabulation is <.0001 and is very significant (.01 level). E6 respondents who felt the quality of leadership from the senior officer level influenced them to stay in the Navy Reserve indicated a planned retirement intent rate of 91.31%. E6 respondents who felt the quality of senior leadership did not influence them to stay indicated a planned retirement rate of 79.45%. The chi-square statistic for this cross-tabulation is <.0001 and is very significant (.01 level). For the inclusive category of E1-E6 respondents, retirement intent is clearly dependent on the influence of leadership at the senior officer (CO/XO) level.

V. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

A. LIMITATIONS OF THE STUDY

Chi-square cross-tabulations were chosen to analyze data in this thesis. Cross-tabulation tables (2x2) are easily interpreted as they consist of only two variables with row and column percentages that display “frequency” (number of respondents in each category), “percent” (percent distribution of entire cross-tabulation), “row percent” (percent distribution for both rows), and column percent (percent distribution for both columns). Although chi-square cross-tabulations are easily interpreted and provide a valuable preliminary examination of the survey responses, they also have the shortcoming of testing for a relationship between only two variables. Multiple regression is a much more comprehensive type of analysis that allows several explanatory variables to be used to explain a dependent variable in a single equation. It is recommended that follow-on studies use multiple regression analysis to investigate these data further.

B. SUMMARY AND RECOMMENDATIONS

1. Gender

Gender was a very significant factor associated with retirement intentions among E1-E5 respondents. Males planned on retiring from the Navy Reserve at a rate 3.5% higher than females. Gender was a slightly significant factor associated with retirement intentions among E6 respondents. E6 males planned on staying in the Navy Reserve at a 1.66% higher rate than E6 females. Overall, E6 males indicated they planned on retiring at a 15.56%

higher rate than E1-E5 males. Similarly, E6 females indicated they plan on retiring at a 17.4% higher rate than E1-E5 females.

2. Marital Status

Marital status was a very significant factor in determining retirement intentions among E1-E6 respondents. E1-E5 married members planned on retiring from the Navy Reserve at a rate of 6.79% higher than E1-E5 non-married members. E6 married members planned on retiring from the Navy Reserve at a rate of 3.74% higher than E6 non-married members. Overall, E6 married members planned on retiring from the Navy Reserve at a rate 13.6% higher than E1-E5 married members. E6 non-married members planned on retiring from the Navy Reserve at a rate 17.25% higher than E1-E5 non-married members.

In further examining marital status, additional Chi-square tests were performed holding gender constant. Marital status was again found to be very significantly associated with retirement intentions among E1-E5 Navy reservists. E1-E5 married males indicated a retirement intention 7.45% higher than E1-E5 non-married males. E1-E5 married females indicated a retirement intention 3.53% higher than E1-E5 non-married females. Marital status was found to be very significantly associated with retirement intentions of E6 males. Married E6 males indicated a 3.75% higher retirement intention than E6 non-married males. Overall, E6 married males indicated a 13.51% higher retirement intention rate than did E1-E5 married males. E6 married females indicated a 16.81% higher retirement intention rate than did E1-E5 married females.

Although E6 married and non-married females indicated a high retirement intention (86.51% and 83.44% respectively), marital status was not found to be significantly associated with retirement intentions among E6 female respondents.

3. Prior Service Status

Prior service experience was very significantly associated with retirement intentions among E1-E5 respondents. E1-E5 prior service members indicated a 5.29% higher retirement intention than did E1-E5 non-prior service members. Overall, E6 NPS respondents indicated a 17.85% higher retirement rate than E1-E5 NPS respondents. E6 prior service respondents indicated a 13.91% higher retirement rate than E1-E5 prior service respondents. Prior service experience was not significantly associated with retirement intentions among E6 respondents.

The results for prior service status suggest several policies to improve retention. The Non Prior Service Accession Course (NPSAC) program does not yield mobilization assets until approximately three years after affiliation. NAVET and OSVET affiliates are mobilization ready after two days of Navy Reserve indoctrination training. Raising quotas for NAVET/OSVET affiliates and lowering those of NPSAC would benefit retention. Additionally, E4 HYT restrictions should be changed to allow for E4 HYT members to stay in the Navy Reserve, filling NPSAC quotas and thus helping to maintain a higher level of mobilization readiness. (Ref 23)

4. Unit Type

Unit type was very significantly associated with retention intention for E1-E5 respondents whose units were attached to Reserve Centers or Readiness Commands. Those

E1-E5 respondents indicated 3.47% higher retirement intent than E1-E5 members attached to units not at Reserve Center/Readiness Commands. Additionally, E6 respondents attached to Reserve Center/Readiness Command type units indicated 3.95% higher retirement intentions than those E6 respondents not attached to units at Reserve Center/Readiness Commands. For all three types of types of units, E6 respondents consistently indicated higher retirement intentions than E1-E5 respondents. Unit type was not significant in determining retirement intentions for E1-E6 aviation unit respondents or E1-E6 shipboard unit respondents.

5. Critical Rates

Being in a critical rate was very significantly associated with retirement intention for E1-E5 respondents. Those E1-E5 respondents not in a critical rate indicated a 4.8% higher retention intention than those E1-E5 respondents in a critical rate. This is most likely due to high demand in the civilian world. For example, construction mechanics can very likely make more money working weekend jobs in the civilian community than they can by participating in a Navy Reserve weekend. Being in a critical rate was not a significant factor in determining retirement intention for E6 respondents.

6. Reserve Experience

a. Quality of Training

Overall, quality of training was a very significant factor associated with retirement intentions among E1-E6 respondents. E6 respondents who indicated the quality of training they received at their drill sites influenced them to remain in the Navy Reserve planned on retiring from the Navy Reserve at an 11.75% higher rate

than those E1-E5 respondents who did not indicate the quality of training influenced them to stay in the Navy Reserves.

E1-E5 respondents who indicated that quality of training received at their drill sites influenced them to stay in the Navy Reserve planned to stay until retirement eligible at a rate 13.18% higher than those E1-E5 respondents who did not so indicate. E6 respondents who indicated that quality of training received at their drill sites influenced them to stay in the Navy Reserve planned to stay until retirement eligible at a rate 5.31% higher than those E6 respondents who did not so indicate.

The results for quality of training suggest continued practices to improve retention. Unit and Reserve Center leadership need to be involved to ensure training is available for all personnel during drill weekend. Equipment such as Shipboard Simulators, Damage Control Trainers, and Reserve Intermediate Maintenance Activity (RIMA) shops are not only excellent training tools, but in the case of RIMA shops create actual products used aboard U.S. Navy ships. RIMA is a win-win situation; fleet products created at a reduced cost during drill weekend which keep Navy reservists busy and happily employed.

b. Accomplishment Recognition

Overall, accomplishment recognition was very significantly associated with retirement intentions among E1-E6 respondents. E6 respondents who indicated the level of recognition received for their accomplishments influenced them to remain in the Navy Reserve, planned on retiring from the Navy Reserve at 12.18% higher rate than those E1-E5 respondents who did not indicate such.

Indicating that the level of recognition received for their accomplishments influenced them to stay in the Navy Reserve was significantly associated with plans to stay until retirement eligible for E1-E6 respondents.

The results for accomplishment recognition suggest several policies to improve retention. Unit and Reserve Center leadership need to make every effort to recognize jobs “well done”. Awards such as “100% attendance”, “Top Physical Fitness member” and “Sailor of the Quarter” and “Sailor of the Year” go a long way in helping to make sailors feel significant in their Navy Reserve accomplishments.

c. Family Impact

Overall, family impact was a very significant factor associated with retirement intentions among E1-E6 respondents. E6 respondents who felt the family impact of being in the Navy Reserve influenced them to stay, indicated a 10.82% higher retirement rate than E1-E5 respondents who felt the family impact of being in the Navy Reserve influenced them to stay. Indicating that the family impact of being in the Navy Reserve influenced them to stay until retirement eligible was highly significant for E1-E6 respondents.

The results for family impact suggest supporting several existing policies for improved retention. Programs that recognize Navy Reserve spouses can go far in helping to gain the support of reservist’s families. The annual Military Spouse Appreciation Day should be taken advantage of to gather staff families together and celebrate spousal support. In today’s military, it is also important to ensure spouses and family members of those Navy Reservists

who are mobilized are given the opportunity to gather together and establish support networks. These types of activities help to ensure members will want to continue on in the Navy Reserve.

d. Civilian Job Impact

Overall, civilian job impact was a very significant factor associated with retirement intentions among E1-E6 respondents. E6 respondents who felt that the level of impact the Navy Reserve had on their civilian job influenced them to stay indicated an 11.49% higher planned retirement rate than those E1-E5 respondents who indicated the same regarding their civilian job. E1-E6 respondents who indicated that the level of impact the Navy Reserve had on their civilian job influenced them were significantly more likely to stay until retirement eligible.

The results for civilian job impact suggest supporting several existing policies to improve retention. Flex drilling should be considered by the Unit and Reserve Commanding Officers whenever possible to allow for higher accommodation of civilian job requirements. Additionally, Patriot Award nomination forms are available from the Employer Support of the Guard and Reserve (ESGR) which help to encourage greater employer support of drilling reservists.

e. Educational Benefits

Overall, the category of educational benefits was a very significant factor associated with retirement intentions among E1-E6 respondents. E6 respondents who indicated educational benefits influenced them to stay planned to stay until retirement eligible at a 13.86% higher rate than E1-E5 respondents indicating the same

regarding educational benefits. Indicating that educational benefits influenced them to stay in the Navy Reserve was significantly associated with planning to stay until retirement eligible for E1-E6 respondents.

f. Senior Leadership (CO/XO)

Overall, perception of senior leadership was a very significant factor associated with retirement intentions among E1-E6 respondents. E6 respondents who felt the quality of leadership influenced them to stay indicated that they planned to retire at a 14.02% higher rate than E1-E5 respondents who held this same opinion.

E1-E5 respondents who indicated the level of senior leadership influenced them to stay planned to stay until retirement eligible at a rate 16.21% higher than those E1-E5 members who did not so indicate. E6 respondents who indicated that the level of senior leadership influenced them to stay planned to stay until retirement eligible at a rate 11.86% higher than those E6 members who did not so indicate.

The results for senior leadership suggest personnel policies to improve retention. The Commanding Officer and Executive Officer set the tone for the entire command. Effective leadership will help to maintain a high level of morale which is an extremely important factor for retention. Leadership training could be expanded and enhanced at various points in officers' careers. For example, the Prospective Commanding Officer (PCO) course could include a leadership refresher section. Reserve Officer Leadership Courses (ROLC) are conducted at Reserve Centers throughout the year. These courses were created for the Part Time Support officer, however, Full Time

Support officers can benefit from ROLC as well. Mission is number one in importance, but every effort should be made to accomplish that mission while keeping morale high. This can be done with effective leadership.

C. CONCLUSIONS

The 2000-2001 Navy Reserve Career Decisions Survey provides a valuable source of information about the characteristics of Navy Reservists and the factors that influence their desires to continue in the Navy Reserve. This thesis is a first step in analyzing the survey responses to learn how decisions to stay in the Navy Reserve until retirement are made.

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APPENDIX: CODE BOOK

Variable Name	Column Name	Column Number	Question
qii	SurvType	1	Are you... 1 = Taking the Total Force Survey? 2 = Accepting promotion/advancement? 3 = Re-enlisting? 4 = Extending? Retiring... 5 = With pay 6 = Without pay Voluntarily Separating... 7 = Transfer to the IRR 8 = Transfer to another Reserve component 9 = Transfer to active-duty Navy Involuntarily Separating... 10 = High Year Tenure 11 = Unsatisfactory Performance 12 = Reached Retirement Age (60)
qiii	gender	9	What is your gender? 1 = Male 2 = Female
qiv	marital status	10	What is your current marital status? 1 = Single, never married 2 = Married 3 = Legally separated 4 = Divorced 5 = Widowed

Codebook continued

Variable Name	Column Name	Column Number	Question
qviii	paygrade	2	What is your paygrade? 1 = E-1 2 = E-2 3 = E-3 4 = E-4 5 = E-5 6 = E-6 7 = E-7 8 = E-8 9 = E-9 10 = W-2 11 = W-3 12 = W 4 13 = O-1E 14 = O-2E 15 = O-3E 16 = O-1 17 = O-2 18 = O-3 19 = O-4 20 = O-5 21 = O-6 22 = O-7 or above
qixy	Years in current paygrade	3	(text box)
qixm	Months in current paygrade	4	(text box)
qx	Years total service	5	(text box)
qxi	Years SelRes	6	(text box)
qxii	Designator	7	(text box)

Codebook continued

Variable Name	Column Name	Column Number	Question
qxiii	Rate	8	If you are a Chief Petty Officer, Petty Officer, or an officially designated striker, what is your general rating? 1 = Does not apply/I am an Officer 2 = Not rated/I am an AN/SN/FN (not a Designated Striker)
qxiv	Type Unit	11	In what type of unit are you serving? 1 = Unit at Air Site/NAS/NAR 2 = Unit at Reserve/Readiness Center 3 = NRF Ship
nq11	Quality of training at drill site	13	The quality of the training you have received at your drill location 1 = Influence To Leave (strongly) 2 = Influence To Leave (moderately) 3 = Influence To Leave (slightly) 4 = No Effect 5 = Influence To Stay (slightly) 6 = Influence To Stay (moderately) 7 = Influence To Stay (strongly)
nq11a	Training topics are relevant	44	Training topics are relevant to my Reserve job. 1 = very great extent 2 = great extent 3 = moderate extent 4 = slight extent 5 = not at all
nq11b	Training develops/ improves job skills	45	Training I receive develops/improves my job skills 1 = very great extent 2 = great extent 3 = moderate extent 4 = slight extent 5 = not at all

Codebook continued

Variable Name	Column Name	Column Number	Question
nq13	Opportunity to work on primary/ rating designator	14	Your opportunity to work in your primary rating/designator 1 = Influence To Leave (strongly) 2 = Influence To Leave (moderately) 3 = Influence To Leave (slightly) 4 = No Effect 5 = Influence To Stay (slightly) 6 = Influence To Stay (moderately) 7 = Influence To Stay (strongly)
nq13a	Time working in primary rate/ designator at drill	46	During drill weekends 1 = I've spent too little time working in my rating/designator 2 = I've spent about the right amount of time working in my rating/designator 3 = I've spent too much time working in my rating/designator
nq13b	Time working in primary rate/ designator at AT	47	During annual training (AT) 1 = I've spent too little time working in my rating/designator 2 = I've spent about the right amount of time working in my ratin/designator 3 = I've spent too much time working in my rating/designator
nq16	Use of job skills on reserve job	15	Use of my skills on my Reserve job 1 = My skills are under used in this job 2 = My skills are well used in this job 3 = My skills do not match this job
nq20	Amount of respect from immediate supervisors	16	The amount of respect you receive from immediate supervisors 1 = Influence To Leave (strongly) 2 = Influence To Leave (moderately) 3 = Influence To Leave (slightly) 4 = No Effect 5 = Influence To Stay (slightly) 6 = Influence To Stay (moderately) 7 = Influence To Stay (strongly)

Codebook continued

Variable Name	Column Name	Column Number	Question
nq21	Amount of respect from active duty	17	The amount of respect you receive from your active duty counter-parts 1 = Influence To Leave (strongly) 2 = Influence To Leave (moderately) 3 = Influence To Leave (slightly) 4 = No Effect 5 = Influence To Stay (slightly) 6 = Influence To Stay (moderately) 7 = Influence To Stay (strongly)
nq24	Level of recognition for accom-plishments	18	Level of recognition for accomplishments 1 = Influence To Leave (strongly) 2 = Influence To Leave (moderately) 3 = Influence To Leave (slightly) 4 = No Effect 5 = Influence To Stay (slightly) 6 = Influence To Stay (moderately) 7 = Influence To Stay (strongly)
nq25	Fairness of performance standards	19	The fairness of my performance standards 1 = Influence To Leave (strongly) 2 = Influence To Leave (moderately) 3 = Influence To Leave (slightly) 4 = No Effect 5 = Influence To Stay (slightly) 6 = Influence To Stay (moderately) 7 = Influence To Stay (strongly)
nq26	Support for career development	20	The support for my career development 1 = Influence To Leave (strongly) 2 = Influence To Leave (moderately) 3 = Influence To Leave (slightly) 4 = No Effect 5 = Influence To Stay (slightly) 6 = Influence To Stay (moderately) 7 = Influence To Stay (strongly)

Codebook continued

Variable Name	Column Name	Column Number	Question
nq31	Communication within unit	21	Communication within the unit 1 = Influence To Leave (strongly) 2 = Influence To Leave (moderately) 3 = Influence To Leave (slightly) 4 = No Effect 5 = Influence To Stay (slightly) 6 = Influence To Stay (moderately) 7 = Influence To Stay (strongly)
nq32	Number admin duties during drill weekends	22	The number of administrative duties you have during drill weekends 1 = Influence To Leave (strongly) 2 = Influence To Leave (moderately) 3 = Influence To Leave (slightly) 4 = No Effect 5 = Influence To Stay (slightly) 6 = Influence To Stay (moderately) 7 = Influence To Stay (strongly)
nq32a	Amount of time to do paperwork	48	Amount of time to do paperwork 1 = Influence To Leave (strongly) 2 = Influence To Leave (moderately) 3 = Influence To Leave (slightly) 4 = No Effect 5 = Influence To Stay (slightly) 6 = Influence To Stay (moderately) 7 = Influence To Stay (strongly)
nq32d	Number of meetings you have to attend	49	Number of meetings you have to attend 1 = Influence To Leave (strongly) 2 = Influence To Leave (moderately) 3 = Influence To Leave (slightly) 4 = No Effect 5 = Influence To Stay (slightly) 6 = Influence To Stay (moderately) 7 = Influence To Stay (strongly)

Codebook continued

Variable Name	Column Name	Column Number	Question
nq32e	Duplication of effort to get things done	50	Duplication of effort to get things done 1 = Influence To Leave (strongly) 2 = Influence To Leave (moderately) 3 = Influence To Leave (slightly) 4 = No Effect 5 = Influence To Stay (slightly) 6 = Influence To Stay (moderately) 7 = Influence To Stay (strongly)
nq33	Equipment needed to do the job	23	The equipment needed to do the job 1 = Influence To Leave (strongly) 2 = Influence To Leave (moderately) 3 = Influence To Leave (slightly) 4 = No Effect 5 = Influence To Stay (slightly) 6 = Influence To Stay (moderately) 7 = Influence To Stay (strongly)
nq33a	Clothing to do job	51	Clothing to do the job 1 = Influence To Leave (strongly) 2 = Influence To Leave (moderately) 3 = Influence To Leave (slightly) 4 = No Effect 5 = Influence To Stay (slightly) 6 = Influence To Stay (moderately) 7 = Influence To Stay (strongly)
nq33b	Spare parts to do job	52	Spare parts to do the job 1 = Influence To Leave (strongly) 2 = Influence To Leave (moderately) 3 = Influence To Leave (slightly) 4 = No Effect 5 = Influence To Stay (slightly) 6 = Influence To Stay (moderately) 7 = Influence To Stay (strongly)

Codebook continued

Variable Name	Column Name	Column Number	Question
nq33c	Gasoline to do job	53	Gasoline to do job 1 = Influence To Leave (strongly) 2 = Influence To Leave (moderately) 3 = Influence To Leave (slightly) 4 = No Effect 5 = Influence To Stay (slightly) 6 = Influence To Stay (moderately) 7 = Influence To Stay (strongly)
nq33d	Vehicles to do job	54	Vehicles to do job 1 = Influence To Leave (strongly) 2 = Influence To Leave (moderately) 3 = Influence To Leave (slightly) 4 = No Effect 5 = Influence To Stay (slightly) 6 = Influence To Stay (moderately) 7 = Influence To Stay (strongly)
nq33e	Radios to do job	55	Radios to do job 1 = Influence To Leave (strongly) 2 = Influence To Leave (moderately) 3 = Influence To Leave (slightly) 4 = No Effect 5 = Influence To Stay (slightly) 6 = Influence To Stay (moderately) 7 = Influence To Stay (strongly)
nq33f	Computers to do job	56	Computers to do job 1 = Influence To Leave (strongly) 2 = Influence To Leave (moderately) 3 = Influence To Leave (slightly) 4 = No Effect 5 = Influence To Stay (slightly) 6 = Influence To Stay (moderately) 7 = Influence To Stay (strongly)

Codebook continued

Variable Name	Column Name	Column Number	Question
nq33g	Bullets to do job	57	Bullets to do job 1 = Influence To Leave (strongly) 2 = Influence To Leave (moderately) 3 = Influence To Leave (slightly) 4 = No Effect 5 = Influence To Stay (slightly) 6 = Influence To Stay (moderately) 7 = Influence To Stay (strongly)
nq33h	Other supplies to do job	58	Other supplies to do job 1 = Influence To Leave (strongly) 2 = Influence To Leave (moderately) 3 = Influence To Leave (slightly) 4 = No Effect 5 = Influence To Stay (slightly) 6 = Influence To Stay (moderately) 7 = Influence To Stay (strongly)
nq37	Job challenge	24	Level of job challenge 1 = Influence To Leave (strongly) 2 = Influence To Leave (moderately) 3 = Influence To Leave (slightly) 4 = No Effect 5 = Influence To Stay (slightly) 6 = Influence To Stay (moderately) 7 = Influence To Stay (strongly)
nq55	Career info available at NRA	25	To what extent do you agree with the following: Career information is readily available at my NRA 1 = very great extent 2 = great extent 3 = moderate extent 4 = slight extent 5 = not at all

Codebook continued

Variable Name	Column Name	Column Number	Question
nq56	Quality of career info is high	26	To what extent do you agree with the following: The quality of the career information available to me is high 1 = very great extent 2 = great extent 3 = moderate extent 4 = slight extent 5 = not at all
nq57	Opp to talk with career counselor on drill	27	To what extent do you agree with the following: I have the opportunity to talk with my career counselor on drill weekends 1 = very great extent 2 = great extent 3 = moderate extent 4 = slight extent 5 = not at all
nq63	Impact of being NR on family	28	The impact of being in Reserves on your family 1 = Influence To Leave (strongly) 2 = Influence To Leave (moderately) 3 = Influence To Leave (slightly) 4 = No Effect 5 = Influence To Stay (slightly) 6 = Influence To Stay (moderately) 7 = Influence To Stay (strongly)
nq64	Impact of NR on civilian job	29	The impact of being in Reserves on your civilian job 1 = Influence To Leave (strongly) 2 = Influence To Leave (moderately) 3 = Influence To Leave (slightly) 4 = No Effect 5 = Influence To Stay (slightly) 6 = Influence To Stay (moderately) 7 = Influence To Stay (strongly)

Codebook continued

Variable Name	Column Name	Column Number	Question
nq74	Availability of flex drills	30	Availability of flex drill (check if doesn't apply) 1 = Influence To Leave (strongly) 2 = Influence To Leave (moderately) 3 = Influence To Leave (slightly) 4 = No Effect 5 = Influence To Stay (slightly) 6 = Influence To Stay (moderately) 7 = Influence To Stay (strongly)
nq76	Education benefits	31	Your educational benefits 1 = Influence To Leave (strongly) 2 = Influence To Leave (moderately) 3 = Influence To Leave (slightly) 4 = No Effect 5 = Influence To Stay (slightly) 6 = Influence To Stay (moderately) 7 = Influence To Stay (strongly)
nq83	Amount of regulation in NR	32	The amount of regulation in the Naval Reserve 1 = Influence To Leave (strongly) 2 = Influence To Leave (moderately) 3 = Influence To Leave (slightly) 4 = No Effect 5 = Influence To Stay (slightly) 6 = Influence To Stay (moderately) 7 = Influence To Stay (strongly)
nq85	Amount of discipline in NR	33	The amount of discipline in the Naval Reserve 1 = Influence To Leave (strongly) 2 = Influence To Leave (moderately) 3 = Influence To Leave (slightly) 4 = No Effect 5 = Influence To Stay (slightly) 6 = Influence To Stay (moderately) 7 = Influence To Stay (strongly)

Codebook continued

Variable Name	Column Name	Column Number	Question
nq89	Physical fitness standards	34	Physical fitness standards for you in the Naval Reserve 1 = Influence To Leave (strongly) 2 = Influence To Leave (moderately) 3 = Influence To Leave (slightly) 4 = No Effect 5 = Influence To Stay (slightly) 6 = Influence To Stay (moderately) 7 = Influence To Stay (strongly)
nq92	Weight standards in the NR	35	Weight standards for you in the Naval Reserve 1 = Influence To Leave (strongly) 2 = Influence To Leave (moderately) 3 = Influence To Leave (slightly) 4 = No Effect 5 = Influence To Stay (slightly) 6 = Influence To Stay (moderately) 7 = Influence To Stay (strongly)
nq105	NR has personal meaning	36	The Naval Reserve has a great deal of personal meaning for me 1 = Influence To Leave (strongly) 2 = Influence To Leave (moderately) 3 = Influence To Leave (slightly) 4 = No Effect 5 = Influence To Stay (slightly) 6 = Influence To Stay (moderately) 7 = Influence To Stay (strongly)
nq106	Be happy to stay NR until eligible retire	37	I would be very happy to stay in the Naval Reserve until I'm eligible for retirement 1 = Strongly Disagree 2 = Moderately Disagree 3 = Slightly Disagree 4 = Neither Agree nor Disagree 5 = Slightly Agree 6 = Moderately Agree 7 = Strongly Agree

Codebook continued

Variable Name	Column Name	Column Number	Question
nq108	Feel emotionally attached to NR	38	I do not feel "emotionally attached" to the Naval Reserve 1 = Strongly Disagree 2 = Moderately Disagree 3 = Slightly Disagree 4 = Neither Agree nor Disagree 5 = Slightly Agree 6 = Moderately Agree 7 = Strongly Agree
nq109	Dedicated to serving in the NR	39	I am dedicated to serving in the Naval Reserve 1 = Strongly Disagree 2 = Moderately Disagree 3 = Slightly Disagree 4 = Neither Agree nor Disagree 5 = Slightly Agree 6 = Moderately Agree 7 = Strongly Agree
nq110	Feel strong sense of belonging	40	I do not feel a strong sense of belonging to the Naval Reserve 1 = Strongly Disagree 2 = Moderately Disagree 3 = Slightly Disagree 4 = Neither Agree nor Disagree 5 = Slightly Agree 6 = Moderately Agree 7 = Strongly Agree
nq116	Current career intentions	41	What are your current career intentions? 1 = I intend to stay in the Naval Reserves until I am eligible to retire 2 = I intend to stay in the active-duty Navy until I am eligible to retire 3 = I intend to stay in one of the other services until I am eligible to retire 4 = I intend to stay in the service 2 or more years 5 = I intend to stay less than 2 years and I will not be retirement eligible 6 = I plan to leave as soon as possible and not join any other service

Codebook continued

Variable Name	Column Name	Column Number	Question
nq117	Quality of leadership at the senior officer level	42	The quality of leadership at the senior officer level (CO/XO) 1 = Influence To Leave (strongly) 2 = Influence To Leave (moderately) 3 = Influence To Leave (slightly) 4 = No Effect 5 = Influence To Stay (slightly) 6 = Influence To Stay (moderately) 7 = Influence To Stay (strongly)
nq121	Quality of leadership at the CPO level	43	The quality of leadership at the Chief Petty Officer level (CPO) 1 = Influence To Leave (strongly) 2 = Influence To Leave (moderately) 3 = Influence To Leave (slightly) 4 = No Effect 5 = Influence To Stay (slightly) 6 = Influence To Stay (moderately) 7 = Influence To Stay (strongly)

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