

A SURVEY OF FACTORS RELATED TO PARTICIPATION IN THE  
NAVAL JUNIOR RESERVE OFFICER TRAINING CORPS PROGRAM  
IN SELECTED VIRGINIA PUBLIC HIGH SCHOOLS

by

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(ABSTRACT)

The purpose of this study was to explore the influence of the Navy Junior Reserve Officer Training Corps (NJROTC) program on cadets in the program and to determine the extent to which it was effective in achieving its stated goals of promoting patriotism, discipline, leadership, respect for authority, and knowledge of the U.S. Navy. The study specifically sought to address the question of why high school students join and remain in NJROTC, and the sub-questions of what aspects of the NJROTC program are associated with participation; what are the characteristics of high school students who participate in NJROTC; what experiences prior to involvement in NJROTC are associated with participation; and what aspects of NJROTC are associated with intent to remain as participants.

A 49-item survey instrument was designed, content validated, and administered to 223 NJROTC cadets in three Virginia high schools. Descriptive statistics and Chi Square analysis were used to answer the research questions.

Primary results indicated that joining NJROTC was associated more with personal contacts (friends, teachers, and school administrators) than with broad

based Navy efforts such as radio and magazine advertising. Cadets indicated NJROTC involvement was associated with improved grades, better self concept, increased desire for leadership, maturity, and awareness of need for community service. The highest portion of cadets were clustered in lower grades (9th and 10th) and apparent attrition was most pronounced in the urban school with high minority enrollment. Over 40% of the respondents indicated plans to engage in a military career after graduation.

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Importantly, it was the United States Navy, of which I am a very proud member, that authorized me the time to pursue my degree and the access to the necessary information that made this dissertation a reality.

## DEDICATION

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## TABLE OF CONTENTS

	Page
ABSTRACT .....	ii
ACKNOWLEDGEMENTS .....	iv
DEDICATION .....	v
TABLE OF CONTENTS .....	vi
LIST OF TABLES .....	ix
CHAPTER	
1. INTRODUCTION	
Statement of the Problem .....	3
Purposes of the Study .....	4
Significance of the Study .....	5
Scope of the Study .....	7
Limitations of the Study .....	7
Definitions of Terms Used .....	7
Organization of the Study .....	9
2. REVIEW OF THE LITERATURE .....	11
History and Related Information on NJROTC .....	12
History and Related Information on the Evolution of Program Evaluation .....	16
Problems in Evaluation .....	19
Motivation and Participation in High School Group Activities .....	21
Summary .....	29

	Page
3. METHOD .....	30
The NJROTC Program .....	30
Research Questions .....	33
Design .....	33
Subjects .....	34
Instrumentation .....	36
Data Collection Procedures .....	38
Data Analysis and Post Hoc Comparisons .....	39
4. RESULTS .....	41
Research Question One: Why do high school students join and remain in NJROTC? .....	42
Research Question Two: Did the NJROTC Program meet its stated goals as perceived by the cadets? .....	51
Research Question Three: What demographic characteristics are associated with high school students who participate in NJROTC? .....	58
Research Question Four: What experiences prior to NJROTC are associated with participation? .....	72
Research Question Five: What aspects of NJROTC are associated with intentions to ascend into Navy ranks? .....	76
5. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS ..	80
Summary .....	80

	Page
Summary of the Findings . . . . .	87
Research Question One: Why do high school students join and remain in NJROTC? . . . . .	87
Research Question Two: Did the NJROTC Program meet its stated goals as perceived by the cadets? . . . . .	90
Research Question Three: What demographic characteristics are associated with high school students who participate in NJROTC? . . . . .	93
Research Question Four: What experiences prior to NJROTC are associated with participation? . . . . .	96
Research Question Five: What aspects of NJROTC are associated with intentions to ascend into Navy ranks? . . . . .	97
Conclusions . . . . .	98
Recommendations for Further Research . . . . .	103
REFERENCES . . . . .	106
APPENDICES	
Appendix A: Survey Questionnaire . . . . .	110
Appendix B: Public Law 88-647 . . . . .	125
Appendix C: Title 10 United States Code . . . . .	129
Appendix D: Correspondence . . . . .	134
VITA . . . . .	142

## TABLES

Table	Page
1. Summary of Responses to Survey Question 9 . . . . .	44
2. Ranking of Job Preparation on Survey Question 9 . . . . .	45
3. Ranking of Military Career on Survey Question 9 . . . . .	46
4. Summary of Responses to Survey Questions 10 and 11 . . . . .	48
5. Summary of Five Areas Cadets Enjoy Most and Least about NJROTC . . . . .	50
6. Change in GPA - Survey Question 44 . . . . .	53
7. Change in Sense of Responsibility - Survey Question 47 . . . . .	55
8. Reasons for Joining NJROTC - Survey Question 27 . . . . .	57
9. Cadet Ages - Survey Question 2 . . . . .	59
10. Hours Worked Per Week - Survey Question 3 . . . . .	61
11. Cadet Grade Level - Survey Question 4 . . . . .	62
12. Ethnic Group Membership - Survey Question 6 . . . . .	63
13. Number of High Schools Attended - Survey Question 8 . . . . .	65
14. Summary of Responses to Survey Question 16 - Participation in Other Activities . . . . .	66
15. Parents in the Military - Survey Question 25 . . . . .	68

	Page
16. Age of Cadet Brothers - Survey Question 36 . . . . .	70
17. Age of Cadet Sisters - Survey Question 37 . . . . .	71
18. Influence of Sea Cadets - Survey Question 10 . . . . .	73
19. Influence of School Counselor - Survey Question 10 . . . . .	75
20. Hands-on Training - Survey Question 21 . . . . .	77
21. Summary of Responses to Survey Question - Benefits of NJROTC Participation . . . . .	78

## CHAPTER 1

### INTRODUCTION

Admiral James D. Watkins, the Chief of Naval Operations from 1982 to 1986, stated in The Virginian-Pilot (1986) that the nation's all-volunteer armed forces will fail by the end of the decade unless the services raise the educational requirements of the youth eligible to enter the service. He said that it is apparent that the nation will not go back to the draft nor will it opt for a compulsory period of national service. The armed forces, particularly the Navy, due to the complexity of modern weapon systems and the increased need for technically oriented, smart operators, cannot lower its standards. As the Navy becomes increasingly high-technology oriented, it will need even more intellectually competent people in the fleet--personnel with a high school diploma versus a G.E.D., higher grade point averages and a proven track record in academics. In April, 1990, the Commander, Navy Recruiting Command, Admiral McKenney, stopped the recruiting of anyone with less than a high school diploma (ALNAV, April 1990). Currently the Navy perceives that one of the best ways to obtain these highly qualified enlistees is to utilize youth in high schools who are already enrolled in a military-oriented elective such as Naval Junior Officer

Training Corps (NJROTC). The NJROTC curriculum, in addition to a strong Naval Science emphasis, teachers responsibility, leadership, discipline, and patriotism (NJROTC Information Book, 1988).

NJROTC is a Department of Defense funded, voluntary training program for high school men and women ages 14 through 17. The Junior ROTC program can be traced back to its Army origins in 1911. Today, the Army, Navy, Marine Corps and Air Force combined have 1,479 Junior ROTC units with over 219,000 cadets. The Navy's Junior ROTC program began with the congressionally-mandated ROTC Vitalization Act of 15 October 1964 (PUBLIC LAW 88-647). Although the first Naval JROTC unit was not established until 1966 and was originally limited to male participants, the law was amended in 1973 to encourage full participation by female cadets, and today's Navy Cadet Corps is made up of over 30,000 students including 10,000 young women (U.S. Naval Institute Proceedings, Vol. 99, August 1973, pp. 50-55).

The NJROTC program is a joint effort by the Navy and local school authorities to provide high school students with naval science information consistent with other fields in secondary education (ROTC Bulletin, June 1990). Since its beginning, the Navy program has expanded to 241 units and has a congressionally-authorized ceiling of 289 units. According to Operations Research, Inc. (1973), the value of the program in terms of its quality of

curriculum, development of life skills with an emphasis on high goals, positive motivation and as an aid to better Navy recruitment, is fully appreciated by Congress and the Department of Defense. They appropriated over 10 million dollars in salaries and administrative costs alone in 1989 (ROTC Bulletin, June 1990). The program has a highly positive ongoing commitment to the development of the nation's young people. NJROTC is considered to be a vital cornerstone of the Chief of Naval Operation's program on personal excellence and national security (Admiral James Watkins, June 23, 1986).

The Navy could expand the NJROTC program to bring even more students under its umbrella and could maximize the experience of those students in the program. However, to do so, they must have additional funds and these funds, in turn, must be justified not only to the Department of Defense budgeteers but also to Congress. This is especially difficult with a large national budget deficit, an expensive war debt remaining and an economy in recession with huge military cutbacks now a reality.

#### Statement of the Problem

The NJROTC program, which was established in 1966, was intended by Congressional charter to have an influence on helping high school students to become better informed and more responsible citizens (Public Law 88-647) and

it's asserted by the Navy to have had a significant impact on naval recruiting (All Hands, June 1987). To date, however, a method to determine why students join NJROTC has not been developed. Furthermore, because recruiting is not a specifically stated objective of the NJROTC program in its congressional charter, there had been little impetus to develop an instrument that could measure the effect of the NJROTC program on Navy accessions. Hence, the primary purpose of this study was to investigate selected aspects of the NJROTC program and to provide a determination of why high school students join and remain in NJROTC.

#### Purposes of the Study

The primary purposes of this study were to investigate factors related to participation and evaluate the motivation of students who join NJROTC and remain in the program until graduation, and assess the extent to which the NJROTC curriculum met its congressionally stated goals as perceived by the cadets.

This study determined:

- (1) Why high school students join and remain in NJROTC?
- (2) To what extent did the NJROTC Program meet its stated goals as perceived by the cadets?

- (3) What demographic characteristics were associated with high school students who participate in NJROTC?
- (4) What experience prior to involvement in NJROTC was associated with participation?
- (5) What aspects of the NJROTC were associated with intentions to ascend into Navy ranks?

Additionally, this study had a secondary purpose, which was an attempt to determine the actual value of NJROTC to recruiting and to collect data that could either support or not support efforts to increase funding for the NJROTC program. There is presently no measure to determine if the program adequately justifies its present budget and/or requires additional funds to operate in the future.

#### Significance of the Study

No prior research had been conducted that has indicated whether or not NJROTC was meeting its current goals and objectives, i.e., promoting a knowledge of the U.S. Navy's role in National Defense and providing leadership opportunities. There is presently no measure to determine if the program warrants the millions of dollars spent on it and/or requires additional funds to operate in the future. This is significant for decision makers involved in funding. They must, with currently inadequate information, recommend budgets that could shrink the JROTC program thus affecting not only the schools which have

the program as an integral part of their curriculum but also the Navy itself, which derives recruits to both its enlisted ranks and to its college ROTC programs.

If additional funds were forthcoming, the NJROTC program could possibly expand if the recruiting need existed from the 241 units presently established to the 289 units already allowed by Congress, but not currently funded by the Navy Department. An additional 48 new units, to include approximately 5,000 students, would significantly increase the manpower pool size from which the Navy could draw in times of severe military cutback where general recruiting is far too expensive and no longer sufficiently funded. The findings of this study are relevant to the total NJROTC program which consists nationally of 241 units and encompasses over 30,000 students.

#### Scope of the Study

Questionnaires were administered to three school NJROTC programs to include more than 100 students. The survey gathered information on student demographics, associated motivational factors, future scholastic and professional goals and perceptions of curriculum goals as noted by cadets in relation to what is stated in the NJROTC charter.

### Limitations of the Study

Available historical recruiting data is based solely on a cadet's declared intention to join a particular branch of the service or to enroll in a college with a military affiliation such as the ROTC program or reserves. No data available is based upon follow-up studies or geographic limitations.

### Definitions of Terms Used

The definitions of the following terms are essential to an understanding of this study.

#### NJROTC

Naval Junior Reserve Officers Training Corps. Units are established at a secondary level educational institution of the United States. There are currently 241 such units in the U.S. and Guam. NJROTC units are composed of 50 or more students of the host school. At least two Naval Science Instructors are assigned to each unit.

#### NJROTC Cadet

A student (usually age 14-17) enrolled in the NJROTC unit at a secondary level school.

#### Naval Science Instructor

Naval Science Instructors (NSI) and Assistant Naval Science Instructors (ANSI) are retired naval officers and noncommissioned officers

hired by secondary schools with the approval of the Navy Department. The NSI is the senior officer serving in the unit and acts as a department head within the school organization. All other instructors in the unit are ANSI's.

### CNET

Chief of Naval Education and Training. This command is centered in Pensacola, Florida, and is in charge of all naval training: air, surface and subsurface. A Vice Admiral is currently the head of CNET. The NJROTC program is managed by CNET through eight area managers.

### Area Five

Area Five is one of eight geographical regions throughout the United States which is subdivided for administrative purposes to manage NJROTC units. Area Five consists of five states including Virginia, West Virginia, Maryland, the District of Columbia and the northern part of the state of North Carolina. There are 32 units in this area encompassing over 3,000 students.

### Naval Science

Naval Science is the term used to describe the course of instruction offered by the NJROTC unit. Students in the first year of instruction are enrolled in Naval Science I; those in second year, Naval Science II; third

year students are enrolled in Naval Science III; and fourth year students in a school with grades 9-12 are enrolled in Naval Science IV.

#### Title 10, United States Code, Chapter 102

The statute which authorizes establishment of Junior Reserve Officers Training Corps units by the military department.

#### CNO - Chief of Naval Operations

The senior military leader in the United States Navy. The CNO is appointed by the President of the United States and is approved by Congress and the Secretary of the Navy. His term of appointment is usually four years and he represents the Navy on the Joint Chiefs of Staff.

#### Organization of the Study

This study is organized into five chapters. Chapter 1 includes the introduction, statement of the problem, purpose of the study, significance of the study, limitations, definition of terms and the organization of the study. Chapter 2 reviews the literature as related to military information on NJROTC and program evaluation in general. Chapter 3 describes the methodology, the NJROTC program and its curriculum, stated goals of the program, operationalization of the goals, research design, the subjects, instrumentation, data collection procedures and data analysis. Chapter 4

analyzes the data and reports the findings, and Chapter 5 contains the summary, discussion and recommendations.

## CHAPTER 2

### REVIEW OF THE LITERATURE

This chapter describes the literature related to NJROTC. Chapter 2 contains:

1. History and Related Information on NJROTC
2. History and Related Information on the Evolution of Program Evaluation
3. Problems in Evaluation
4. Motivation and Participation in High School Group Activities
5. Summary

In order to evaluate the NJROTC program it was necessary to be aware of its roots and origins as well as the background and purpose of program evaluation itself. Such an awareness may promote a clearer understanding of how and why the program has developed as it has and where its future may be. It will also, for those interested in the field of program evaluation, lead to a better conception of the growing importance of this area of study.

### History and Related Information on NJROTC

Neither the legislation establishing NJROTC nor any of its documentation mention recruiting as an objective of the program. For that reason scattered data which could show that a positive relationship exists between NJROTC and its influence on Navy attrition has only been maintained since 1982.

Although units are graded annually on an individual basis, the Navy does not actually attempt to determine the overall attitude of enrolled cadets, nor has an attempt been made to determine what motivates a cadet to join NJROTC and then to remain in the program. Each Naval Science Instructor gives grades just as other secondary school teachers do, but one unit is not compared academically to another except in general terms such as a student's overall G.P.A.

NJROTC has four major objectives as stated in their Congressional charter.

They are:

- To promote habits of orderliness and precision and to develop respect for constituted authority
- To promote patriotism
- To develop a high degree of personal honor, self-reliance, individual discipline and leadership

- To provide a means for students to become better informed citizens in matters of national security and to develop a knowledge of and an appreciation for the U.S. Navy's role in the national defense structure.

Those objectives were important to this study both because of their content and because they intentionally omitted the subject of recruiting from the mandate of the NJROTC program. That is, NJROTC was designed by legislation and implemented by the Navy in participating schools as an integral part of the educational and overall personal development of its participants. Nothing in NJROTC plans or program documents suggested that NJROTC was oriented towards recruiting persons to the Navy, although increased awareness of the Navy is clearly intended.

In 1963, the Department of Defense advocated the discontinuation of all JROTC programs specifically because they did not appear to encourage participants either to obtain commissions or to enter the enlisted ranks (Reserve Officer's Training Corps Vitalization Act of 1964). Because of strong Congressional opposition, JROTC was retained and units were established for the first time for the Navy, Air Force and Marine Corps. This had the effect of expanding the authorization for JROTC from 255 units (all operated by the Department of the Army) to 1,479 units currently shared among the 4 services.

Thus, the absence of recruiting as an objective in current legislation is partially the result of congressional reaction to an executive branch attempt to discontinue JROTC. Public Law 88-647 essentially says that the value of JROTC cannot be estimated from a count of enlistees or newly commissioned officers because recruiting is not the goal established for the program by the founding legislation.

Several aspects of the NJROTC program appear to guard against the use of an NJROTC program in a school as an explicit vehicle for recruiting. First, the program supposedly parallels the college NROTC program and focuses primarily on the concerns of officers, not of enlisted personnel. Second, the Naval Science Instructors (NSI) and Assistant Naval Science Instructors (ANSI), although they are Navy retirees, are employed by the local school systems and are hired and primarily supervised by their respective school principals rather than the Navy. Third, local Navy recruiters do not visit NJROTC units except with the approval of the NSI. Since the NSI is in the employ of the school, the NSI will not normally allow a visit by a recruiter if he has not obtained the approval of the principal.

In reality, however, the program does not work exactly as congressional legislation appears to indicate. To begin with, although Naval Junior Reserve Officer Training Corps (NJROTC) does imply an officer program, the fact remains that the largest portion of graduates, enlist rather than enter the military through

an officer accession program (Operation Research, Inc., 1973). Second, after more than twenty years of active service, former military people teaching a military-related subject such as Navy Science could have a profound impact on young students' decisions whether or not a military career is an attractive option (The Retired Officer, March 1986, p. 33). A strong role model should entice a greater number of cadets (and other high school students not in the program) to select the military as an option more than the strength of the Naval Science syllabus, patriotism, or any other factor. In 1987-88 3,673 NJROTC graduates entered military service (CNET Statistics, June 1989). Although recruiters do not come into NJROTC classrooms without the NSI's permission, they are seldom turned away. On the contrary, recruiters are invited to visit the unit much more often than they actually do. Recently the NJROTC program has instituted a scholarship program which awards 75 full Navy ROTC scholarships to some of the best colleges and universities in our country. Therefore, although NJROTC is not an "official" recruiting agency, it is certainly an "unofficial one" and the scholarship program was clearly designed to attract students with high academic qualifications.

### History and Related Information on the Evolution of Program Evaluation

Program evaluation may be described and summarized into six periods (Madaus, et al., 1983). The first period, 1800 to 1900, is referred to as the Age of Reform. This was the period of the Industrial Revolution which encompassed technological changes, social changes and a period marked by continued and often lengthy attempts to reform educational and social programs and agencies in Great Britain and the United States.

In the United States, perhaps the earliest formal attempt to evaluate the performance of schools took place in Boston in 1845. This began the long tradition of using pupil test scores as a principal source of data to evaluate the effectiveness of a school of instructional program. The first formal educational program evaluation recognized in America was conducted by Joseph Rice between 1887 and 1898 (Madaus, et al., 1983).

The second period, from 1900 to 1930, is referred to as the Age of Efficiency and Testing. The application of scientific management became a powerful force in administrative theory and in educational and industrial circles. Systemization, standardization, and most importantly, efficiency, were the emphasis of the scientific movement. Surveys conducted in a number of large school systems focused on school and/or teacher efficiency. During this period, standardized achievement tests were developed. With the growth of

standardized achievement tests after World War I, school districts began to use tests to make inferences about program effectiveness.

The third period, 1930 to 1945, is referred to as the Tylerian Age. During this period Ralph W. Tyler, who coined the term "education evaluation" and who is often referred to as the father of educational evaluation, had a major influence on education, educational evaluation, and testing.

The Age of Innocence, 1946 to 1957, characterizes the fourth period, a period which, according to Madaus, et. al (1983), could have also been called the Age of Ignorance. This period was a time of poverty, racial prejudice and segregation. Also, during this period, there was an expansion of educational facilities, programs, and an increase in personnel.

The fifth period, 1958-1972, witnessed the evaluations of large scale curriculum development projects funded by federal monies. Also, according to Madaus, et al. (1983), this period "marked the end of an era in evaluation and the beginning of profound changes which saw evaluation expand as an industry and into a profession dependent on taxpayer monies for support."

The War on Poverty was launched and billions of dollars were poured into programs by the federal government aimed at equalizing and upgrading opportunities for all citizens across the broad spectrum of health, social and educational services. Concurrent to this effort to help the poor was the

concern that the money invested in these programs might be wasted if accountability requirements were not imposed. To address this concern, Senator Robert Kennedy and some of his colleagues in Congress amended the Elementary and Secondary Education Act of 1964 (ESEA) to include specific evaluation requirements.

Prior to the mid-1960s, the federal government showed little or no interest in evaluating federal programs and funded very few. However, between 1967 and 1972, Congress passed approximately twenty-three Acts requiring the evaluation of federal programs. Since 1972, all federal executives are required to conduct program evaluations (Meyers, 1981).

While this is true, probably the relative inexpense of the NJROTC program in relation to other training programs, i.e. flight training, medical training (Watkins, 1986), did not seemingly warrant the evaluation of the NJROTC program until its influence on Navy accessions became an issue. Accountability, especially in the military, became a byword in the 1980s. With looming deficits, suddenly, many were interested in what worked and how much it cost. To supply evidence of accountability for NJROTC requires educational evaluation. The rapid growth of the NJROTC program since the 1960s and the fact that no educational evaluation has been done concerning the program, left it open to a multitude of possible studies which could cover new ground. Under this

enormous umbrella the area this study evaluates is a relatively small segment of the program.

During the sixth period (1973 to present) the field of evaluation crystallized and emerged as a distinct profession, related to but distinct from its forbearers of research and testing. The progress made by educational evaluators has moved with great momentum. Even though the gains over the past fifteen years are impressive, problems still exist.

#### Problems in Evaluation

One of the main problems in evaluation is vague program goals. This is particularly true of the NJROTC program. Through the years, since the earliest attempt to evaluate programs, specific and clearly stated goals have been seriously lacking in many programs. Goals were either assumed or supposedly self-evident. If stated, as in the NJROTC charter, they were stated in very broad and often ambiguous terms. That presents a problem when evaluating any changes that may occur in the program, for a program which does not have clearly defined goals cannot be evaluated without specifying some measurable goals.

Because of the need for clarity, the researcher selected certain indicators that had not previously existed but were created, based on the author's criteria

and interpretation and which were meant to calculate the NJROTC program's successes and to address the stated goals. It must be remembered that interpretations of some of the behaviors that are integral to the goals were so arbitrary that any attempt to create a scale to measure them was subjective at best. For example, patriotism is a characteristic that is relative to circumstance and the person who is the definer. This is not to say that patriotism is an unreal concept but only to confess that the author had to define it by her standards and suggests that an attempt to define patriotic attitudes is difficult.

A second problem of evaluation is the utilization of evaluation results. The ultimate purpose of evaluation is a contribution to the effectiveness of a program. Therefore, the implementation of results is a critical phase in the evaluation process. Yet, even the most carefully designed and executed evaluative efforts do not automatically lead to or insure meaningful action (Caro, 1971). A number of constraints may be attributed to the nonuse or limited use of evaluation results. Weiss (1972) lists five constraints:

- 1) the evaluator's perception of his role in the utilization process as uninvolved, if the facts are not obvious and the evaluator has little or no intention of following through,
- 2) the organization's resistance to change, for a number of reasons. A few of these reasons are: the lack of necessary funds to institute

needed changes, satisfaction with the status quo, and fear of the side effects of instituting new practices, 3) inadequate dissemination of evaluation results to appropriate administrators, 4) the gap between evaluation findings and clear courses of action for the future, and 5) the tendency of some evaluations to show little or no positive effect. An additional reason for the non-utilization of evaluation results is the fear of losing financial support which is, at times, related to political factors.

#### Motivation and Participation in High School Group Activities

The subject of what motivates teenagers to join and then to remain active in high school group activities has been debated by a number of authors at great length. A variety of hypothesized results have been generated.

Group activities, both formal and informal, form the basis by which youth develop an experience base for the concepts of peer relationships (Alschuler, 1973). According to Veroff (Alschuler, 1973) social achievement based on social comparison is what provides the motivation to master the skills necessary to cope and explore the environment as an individual organism. He defines motivation as an "overall tendency to behave with respect to achievement goals." Social achievement motivation brings into play standards of excellence based on social comparison.

Comparison usually entails relative standards of performance--the most excellent is the "best" of the group. An example of this is the athlete who wants to be perceived as both an athlete and a leader might logically consider joining the school athletic club and even strive to obtain a leadership position within that club. This would provide competition and social comparison within certain norms where there are relative standards of performance. Social comparison and social approval do not have to mean competition but they often do. Teenagers tend to evaluate themselves based upon peer norms. Veroff (Alschuler, 1973) believes that if social comparison goes right, and if the youth does not see him or herself as woefully incompetent, then they begin to become assured of their own abilities and their own autonomy. They begin to differentiate situations in which their own actions and performance are properly in sync with others. For successful mastery of social comparison a youth has to compare favorably with a relatively large majority of others of the same sex and age with respect to the attributes of the social group to which they are comparing themselves.

Schools are microcosms of all society. Schools are for learning and they are made up of groups. Groups can be found in the classroom, playground, locker room, and through official extra-curricular activities. In every recognized group there are also sub-groups. Understanding groups, what motivates them and who constitutes certain groups can enable a school or organization such as

the Navy to evaluate how well they are doing in helping youngsters emerge into society with the ability to cope and inaugurate necessary changes in society. To understand the forces behind a group, i.e. NJROTC, investigation must be done to understand the composition of the group. What constitutes its personality and life experience? Often there are compelling and even contradictory forces that occur in individuals when they are members of groups. Any group at any given moment includes within itself a series of contradictions. Ruth Newman (1974) states that there could be dozens of paradoxes at work at any moment of a group's life that may dictate its direction and composition. Examples of some of these paradoxes are:

1. The adult leadership style
2. The juvenile leadership style
3. Group competence
4. Peer support

According to Newman there is overwhelming evidence that what the leader of a group really thinks and does and how he or she really feels is passed on and communicated to the group regardless of what he or she believes they may be communicating. This theory would prove exceptionally relevant to NJROTC in that the Navy has stressed continuity in the "type" of adult leader it appoints with regard to training background and experience. That could provide

more beneficial standardization for NJROTC than other groups in a school might enjoy. When compared to other groups with similar leadership philosophies, i.e. Boy Scouts of America, it has become a proven, effective strategy (Caro and Wade, 1971).

Because all Naval Science Instructors are former Naval officers, they have spent years in formal, standardized military training. All NSI's have been through an officer candidate school, all have met the same promotion criteria, and all have earned certain standard naval qualifications. Boy Scout leaders, on the other hand, come from very dissimilar work backgrounds and other than a short introduction to "How to Be a Scout Leader" they have little formal training by comparison to NSI's.

Homer Rainey (The Annals, 1937) wrote that a new problem had developed in relation to American youth because of the change in the focus of the American economy. As the United States became less agriculturally centered, education received more stress, leisure time increased, and the role of extracurricular activities at school became fundamentally important. Youth for perhaps the first time in American history had choices to make relative to their future careers. Prior to this most sons did as their fathers did and daughters became wives. Schools had to begin planning educational programs that involved more than just teaching the "three R's."

Edward Lindeman (The Annals, 1937) noted that in the 1930's leisure time among the working class was viewed as a positive factor for the first time. It had previously been viewed as idleness. The opportunities afforded by recreational time were numerous. Continuing education became an option as well as community service for the common person. Youth could become involved in political or cultural clubs and service organizations (many of them based in schools after classroom hours). Government controlled youth organizations came in vogue for the first time--some of which were modeled on youth movements in Europe (Winslow, The Annals, 1937). Seeing a great opportunity to direct the thinking of young people along specific and definite lines, political and government organizations established youth organizations of their own.

In all countries youth have always been faced with the danger of being exploited by unscrupulous adults because of their idealism and inexperience. They have long been viewed as a source of readily influenced advocates and supporters of some credo or cause. The existence of these dangers cannot possibly mean that nothing should be done with youth and that they should just drift along aimlessly during the important maturation years. Here, responsible, organized groups offer teenagers the opportunity for peer interaction, comparison and competition. Leadership is to some extent a learned trait. While some

leader traits are innate, the military has long held the belief that great leaders are trained. If this is the case then the earlier that training commences, the better the chance of developing the quality of leadership needed by the services. At the beginning of the century leaders were recruited by slogans, appeals to go to other countries and by slum conditions. Today, those appeals are largely unchanged but the opportunity for advancement and scholarships are new, highly desirable enticements. These and the appeal of peer group involvement have proved a winning combination in motivating high school youth to participate in school military service organizations. That fact is proven by the sheer increase in the number of schools with some type of ROTC program now, versus 20 years ago. JROTC has grown from 255 units in 1963 to 1,479 among the four services.

Students not only master academic skills in school but also have a range of social experiences with peers and adults that prepare them for future work roles. This philosophy is why the JROTC programs as congressionally mandated do not only provide academic curriculum but have objectives that all relate to-- social skills that promote strength of character. They stress the overall personal development of the participants.

Epstein and Karweit (1983) noted that personal friendship networks, often those established during extracurricular activities, probably affect status

attainment indirectly by shaping psychological attitudes and values suitable for work in either simple or complex organizational environments and directly by influencing the status of the job actually obtained through structure constraints.

Coser (1975) presented detailed hypotheses about how the complexity of the social roles in which a person functions contributes to the development of individual autonomy, the ability to take the role of others and the ability to participate in multiple settings. Hansel (1981) showed that psychological development is positively associated with involvement in more extensive and complex network structures in a sample of high school students. The progression to higher levels of ego development was associated with the development of liaison roles between peer cliques which required balancing multiple, sometimes competing, social roles. One might assume, based on this information, participation in a group association such as NJROTC would, therefore, be beneficial to personal growth and development.

Epstein and Karweit (1983) noted that students may be moved to a goal by friends and peers who have already adopted the goal in their own behavior. This would be particularly relevant to the military if students by joining NJROTC are motivated to join the Navy because peers in the NJROTC experience have already chosen to do so.

As mentioned earlier, a position held by some scientists (McDill and Riggs, 1973) concerned with the study of youth in school settings is that the adolescents actually comprise a semi-independent social system with distinct norms and values, a system that ranks its members according to criteria it defines and a social structure or pattern of interaction which helps shape its cultural content. As our society has become more technologically advanced and the gap between generations has widened and sometimes made parental knowledge outdated and the family incapable of adequately socializing the child, schools have been forced to become a major socializing agency. They control an ever increasing amount of time and have assumed more and more responsibility for developing conformity with not only scholastic achievement but also a wide range of social behaviors.

The National Commission on Youth in 1980 (Westview Press, 1980) said that extracurricular activities are a means to give youth a sense of membership in community through a variety of activities. They felt that

- "Concepts used in clubs and extracurricular organizations can be utilized to resolve community problems.
- Develop an increased measure of responsibility by making logistical decisions on how to proceed effectively
- Having others dependent on one's actions

- Develop a sense of camaraderie or civic pride arising from the efforts of many individuals to accomplish a particular task or desired goal."

### Summary

A review of the literature referencing the NJROTC program indicated that a significant number of youngsters joined military service after graduation from high school (Operation Research, Inc., 1973) and membership in the NJROTC program and that stated program goals may have been effective in promoting patriotism, self reliance, individual discipline and leadership. That students are drawn to NJROTC is similar to their being drawn to other character-building organizations, such as Scouts and Student Council Associations. The NJROTC program has been tasked with influencing the conduct of its members and of establishing among them codes of conduct that exert a permanent influence in their lives with or without military service in their future.

If the positive results the Navy desires, based upon their organizational format, are to be achieved then the Navy needs to be mindful of the fact that each school climate will differ, the motives to participate will vary, and the individual personality of the group must be considered to provide for inherent differences and to maximize each group's potential for growth (Hansell, 1981).

## CHAPTER 3

### METHOD

This chapter describes the stated goals of the study and the methods used to address the research questions.

Chapter 3 contains:

1. NJROTC Program Description
2. Research Questions
3. Design
4. Subjects
5. Instrumentation
6. Data Collection Procedures
7. Data Analysis, Post Hoc Comparisons

#### The NJROTC Program

NJROTC is a Department of Defense funded, voluntary training program for high school men and women ages 14 through 17. The Junior ROTC program may be traced back to its Army origins in 1911. Today, the Army, Navy, Marine Corps and Air Force combined have 1,479 Junior ROTC units with over 219,000

cadets. The Navy's Junior ROTC program began with the congressionally-mandated ROTC Vitalization Act of 15 October 1964 (PUBLIC LAW 88-647). Although the first Naval JROTC unit was not established until 1966 and was originally "For Men Only," the law was amended in 1973 to encourage full participation by female cadets, and today's Navy Cadet Corps is made up of over 30,000 students including 10,000 young women (U.S. Naval Institute Proceedings, 1973).

The NJROTC program is a joint effort by the Navy and local school authorities to provide high school students with naval science information consistent with other fields in secondary education (ROTC Bulletin, June 1990). Since its modest beginning, the Navy program has expanded to 241 units and might continue to grow, depending on availability of funds, until it reaches its congressionally-authorized ceiling of 289 units. The value of the program in terms of its quality of curriculum, development of life skills with an emphasis on high goals, positive motivation and as an aid to better Navy recruitment, is fully appreciated by Congress and the Department of Defense (Operations Research Inc., 30 September 1987). They appropriated over 10 million dollars in salaries and administrative costs alone in 1989 (ROTC Bulletin, June 1990). The program has a highly positive ongoing commitment to the development of the nation's young people. NJROTC is considered to be a vital cornerstone of the

Chief of Naval Operation's program on personal excellence and national security (Admiral James Watkins, June 23, 1986).

NJROTC has four major objectives as stated in their Congressional charter.

They are:

- To promote habits of orderliness and precision and to develop respect for constituted authority
- To promote patriotism
- To develop a high degree of personal honor, self-reliance, individual discipline and leadership
- To provide a means for students to become better informed citizens in matters of national security and to develop a knowledge of and an appreciation for the U.S. Navy's role in the national defense structure.

Those objectives were important to this study both because of their content and because they intentionally omitted the subject of recruiting from the mandate of the NJROTC program. That is, NJROTC was designed by legislation and implemented by the Navy in participating schools as an integral part of the educational and overall personal development of its participants. Nothing in NJROTC plans or program documents suggests that NJROTC is oriented towards

recruiting persons to the Navy, although increased awareness of the Navy is clearly intended.

### Research Questions

This study was designed to determine:

- (1) Why high school students join and remain in NJROTC?
- (2) To what extent did the NJROTC Program meet its stated goals as perceived by the cadets?
- (3) What demographic characteristics are associated with high school students who participate in NJROTC?
- (4) What experiences prior to involvement in NJROTC are associated with participation?
- (5) What aspects of the NJROTC are associated with intentions to ascend into Navy ranks?

### Design

This study was designed to determine if the Navy JROTC program was meeting its congressionally stated goals and to gather demographic information related to NJROTC program participation in Virginia public high schools. A descriptive research case design was employed for the purposes of this study. Descriptive research is primarily concerned with existing conditions or situations

and, as such, is a structured attempt to obtain facts and opinions about those existing conditions. A case design is typically used to examine a single cohesive group or groups and answer questions that ask for a description of a program's goals, participants, activities and results (Fink & Kosecoff, 1980). A significant feature of the descriptive research case design is its ability to provide useful data which, if confirmed, may be studied in more controlled situations using an experimental design.

### Subjects

The subjects of this study were 223 cadet members of three Virginia high school NJROTC units. The units selected for evaluation were picked from an academic list of Virginia units. The list was provided by Commander Naval Education and Training (CNET) Pensacola, Florida. CNET has control over all NJROTC units nationally.

The author picked units located in the Hampton Roads area of Virginia because of her geographic ability to study those groups.

The CNET academic list was divided into thirds by the author, and she selected three units purposely with each unit being in a separate one-third grouping on the CNET academic scale. This was done to gather data from an academically diverse group. High School #1 was in the top one-third

academically, High School #2 in the middle one-third academically, and High School #3 in the bottom one-third academically.

The NJROTC cadets were from high schools in three separate school districts that had accredited NJROTC units. The students were both male and female in grades 9-12. Entire units were surveyed at each of the three schools. Racial mix and sex of the groups varied from school to school but every attempt was made with the consent of the Commander of Naval Education and Training to pick three fairly similar NJROTC units based on race and number of cadets. The subjects reflected a varying socio-economic and academic background.

High School #1 had an NJROTC unit of 80 cadets of which 57 were available to fill out the survey instrument. This sample consisted of 40 Whites, 10 Blacks, 1 Hispanic and 6 others. There were 44 males and 13 females. The school is within city limits but is predominantly suburban in nature. Both of its NJROTC instructors are white. The racial composition of the school is primarily white with a large proportion of students having parents in the Armed Forces or employed by the Government in a Civil Service capacity.

High School #2 had a somewhat larger NJROTC unit with 92 cadets. Sixty-six students from the unit were available to fill out the survey. The sample included 52 Whites, 8 Blacks, 4 American Indians, 1 Hispanic and 1 other. Forty-nine cadets were male, and 17 were female. This school was located in the

county, in a primarily rural area with a large farming population and a nearby Indian Reservation. A significant number of military and Civil Service employees from two nearby military bases reside in this county. Both NJROTC instructors were white.

High School #3 was racially much more diverse and that is reflected in the makeup of the NJROTC unit there as well. The unit was comprised of 117 cadets of which 100 responded to the survey. The sample had 40 Whites, 42 Blacks, 7 Hispanics and 11 other. Sixty-five cadets were male, 33 were female. Two did not respond to the question of sex. The school is old, more than 80 years, but has had a massive, expensive renovation in the last two years that equalled in cost to the budget of several rural Virginia county school districts. While being very much an inner city school with a student population that is primarily bussed in, the building is modern and well maintained. As at the other two NJROTC units, both NJROTC instructors were white.

#### Instrumentation

A survey instrument was constructed by the author and used to answer this study's research questions. The author personally drafted each item of the survey. Its intent was to gather significant amounts of attitudinal and demographic information that could allow for a determination on the success of

the selected NJROTC units meeting stated NJROTC goals as perceived by the cadets.

The survey format went through five revisions while being reviewed for clarity and content validity. The instrument was reviewed on two occasions by NJROTC instructors and on five occasions by graduate school faculty members. The entire dissertation committee reviewed the survey document at the time of the author's proposal examination. The final version of the survey instrument administered is recorded in Appendix A.

This was a paper and pencil instrument asking 49 questions, both demographic and attitudinal. The purpose of this questionnaire was to provide answers to research questions 1-5. Eighteen of the questions were yes/no answers and the rest were multiple choice. One question using a Likert scale was included. Directions were administered to each NJROTC class being surveyed and the survey time to completion was between 15 and 30 minutes, although the entire class period was allocated and available.

No pre-test or pilot of the instrument was done. It is very difficult to schedule class time for other than NJROTC course curriculum as the NJROTC program is very regimented. The last week of school during final exams was the only time available to survey the cadets that a majority, including graduating

seniors, were available. Class time was used during non-test periods based on pre-arrangements made with the NJROTC instructor.

### Data Collection Procedures

The author personally instructed all students on the purpose of their surveys and gave directions on filling them out. All cadets received the same instructions and forms. All students in each NJROTC unit at each school were surveyed the same week. Absentees were not re-surveyed. Units generally consist of 75 or more students each. It took students from 15 to 30 minutes to answer each survey. All papers were collected as they were finished.

All surveys were completed in June, 1991. Each school was surveyed during the last week of school prior to summer recess.

A request was made to interview the principals of each school. In all cases the request was denied. Norfolk school administrators are required to get school superintendent permission for any such interview. Gloucester had a new principal who was unfamiliar with NJROTC and the Virginia Beach high school surveyed had an acting principal as the regular principal was out with a long term health problem. This interview has been therefore recommended as suitable for future research.

### Data Analysis and Post Hoc Comparisons

A statistical analysis of the data was conducted to answer the major research questions. The descriptive statistics that were run for this program were frequency distributions and categorical percentages. Crossbreaks were used as a means of placing the same data in two categories at the same time and a descriptive summary was provided for the surveys. Descriptive statistics were employed to provide demographics about the subjects in the study. The data is reported in narrative and tabular form in Chapter 4.

A Chi Square analysis was used to compare the three high school NJROTC units to determine if cadet participant responses were significantly different by geographic area at a probability level of less than or equal to .05. A Chi Square is the strongest non-parametric measure available and it was selected because the survey data generated from the NJROTC survey instrument was non-parametric. Non-parametric measures are appropriate whenever assumptions of sample or population normality may not be made. NJROTC participation is voluntary, which creates a selection threat to the validity of the study if parametric measures are used. Additionally, grade and behavior requirements precluded participation by some students and while participation standards vary from school to school and are subjective, unit size is a naturally limiting factor. Exclusivity of NJROTC participation will be an interesting topic for future

investigation as it has a direct impact on group normalcy. The primary reason for using the non-parametric measure is that parametric measures require strong assumptions regarding the nature of population data, whereas non-parametric measures generally do not.

Non-parametric procedures rely on frequency counts and ranking procedures. They can be used to treat data that is classificatory in nature, as was the case with much of the data generated from the survey administered to NJROTC cadets. The Chi Square was used because the procedure generates an observed frequency, an expected frequency, and a residual. The expected frequency is the number of cases that would be in the cell if the row variable and the column variable were unrelated (statistically independent). The Chi Square residual equals the observed frequency minus the actual cell count. Positive residuals indicated that the cell contains more cases than it would if the row and column variables were unrelated.

## CHAPTER 4

### RESULTS

The purpose of this chapter is to present the data collected in this study and the results of analysis of that data. Data collection was designed to answer five primary research questions. Those questions were:

- (1) Why do high school students join and remain in NJROTC?
- (2) To what extent did the NJROTC Program meet its stated goals as perceived by the cadets?
- (3) What demographic characteristics are associated with high school students who participate in NJROTC?
- (4) What experiences prior to involvement in NJROTC are associated with participation?
- (5) What aspects of the NJROTC are associated with intentions to ascend into Navy ranks?

The analysis and findings are organized and presented under each research question. Further, the analysis was focused on differences in the responses which may have been related to geographic areas from which the

respondents were selected. This study is descriptive in nature and as such requires caution in the generalization of the results. Results should, however, be used as the basis for further study under more controlled conditions.

Analysis by geographic area/city was appropriate to this study because it is one of NJROTC in selected schools implying a comparison across those schools. Since all schools were in different cities/geographic areas, such an analysis would be an actual comparison across schools.

#### Research Question One:

##### Why do high school students join and remain in NJROTC?

A frequency distribution was run on survey questions 9, 10 and 11 to determine the five responses for each question that were chosen most often. Subsequently, a crosstabulation and Chi Square ( $X^2$ ) were run on each of the most frequently chosen selections from items 9, 10 and 11 controlling for the city of residence.

Survey Question 9 asked respondents to give the five most important reasons for joining the NJROTC. The top five responses, in ranked order were: to prepare for a future job (37.7%), to prepare for a military career (22.4%), to enter the military in an advanced paygrade (20.2%), to earn an NJROTC scholarship (17.9%) and to have fun (13%). The bottom five responses, in

ranked order were: teacher recommendation (1.8%), desire to go to sea (2.7%), high school does not have NJROTC program (3.1%), to have fun (3.1%) and community does not have Sea Explorer program (4.9%).

Table 1 is a summary of the top 5 responses to Survey Question 9: Reasons Students Join ROTC.

Table 2 presents the Chi Square analysis of the relationship between respondents' ranking of job preparation as the reason for joining NJROTC and geographic location. The  $X^2 = 18.6767$  with 10 degrees of freedom (DF) was found to be significant at the .0446 level which is less than the target level of  $p \leq .05$ . This indicates a relationship between the ranking of job preparation as a reason for joining NJROTC and the geographic location of the respondent.

Table 3 presents the Chi Square analysis of the relationship between respondents' ranking of planning a military career as the reason for joining NJROTC and geographic location. The  $X^2 = 13.6761$ ; DF = 10 indicated a probability value of .1883 level which is greater than the target level of  $p \leq .05$ . This indicates no significant relationship between the ranking of a planned military career as a reason for joining NJROTC and the geographic location of the respondent.

Table 4 is a summary of the top five responses to Survey Question 10, where cadets were asked to identify those sources which had influenced their

TABLE 1

**SUMMARY OF TOP FIVE RESPONSES TO SURVEY QUESTION 9: REASONS STUDENTS JOIN NJROTC**

<u>REASONS FOR JOINING</u>	<u>PERCENT</u>
To prepare for a future job	37.7%
To prepare for a military career	22.4%
To enter military in an advanced paygrade	20.2%
To earn an NJROTC scholarship	17.9%
To have fun	13.0%

**SUMMARY OF BOTTOM FIVE RESPONSES TO SURVEY QUESTION 9: REASONS STUDENTS JOIN NJROTC**

<u>REASONS FOR JOINING</u>	<u>PERCENT</u>
Teacher recommendation	1.8%
Desire to go to sea	2.7%
High school does not have NJROTC program	3.1%
To have fun	3.1%
Community does not have Sea Cadet program	4.9%

TABLE 2

An analysis of respondents ranking of job preparation (survey response 9) by geographic location. Question 9: Reasons students join NJROTC.

## RESPONDENTS' RANKING OF JOB AS REASON FOR JOINING NJROTC

CITY	0	1	2	3	4	5	TOTAL
GLOUCESTER	19.0 <sup>(1)</sup>	21.0	10.0	7.0	1.0	8.0	66.0 <sup>(4)</sup>
	18.3 <sup>(2)</sup>	24.9	8.3	5.9	4.1	4.4	29.0% <sup>(5)</sup>
	0.7 <sup>(3)</sup>	-3.9	1.7	1.1	-3.1	3.6	
NORFOLK	27.0	35.0	11.0	12.0	11.0	4.0	100.0
	27.8	37.7	12.6	9.0	6.3	6.7	44.8%
	-0.8	-2.7	-1.6	3.0	4.7	-2.7	
VA BEACH	16.0	28.0	7.0	1.0	2.0	3.0	57.0
	15.8	21.5	7.2	5.1	3.6	3.8	25.6%
	0.2	6.5	-0.2	-4.1	-1.6	-0.8	
TOTAL	62.0 <sup>(6)</sup>	84.0	28.0	20.0	14.0	15.0	223.0 <sup>(7)</sup>
	27.8%	37.7%	12.6%	9.0%	6.3%	6.7%	100.0%

$$\chi^2 = 18.6767; DF = 10; p = .0446^*$$

\*Statistical Significance  $p \leq .05$

## TABLE LEGEND

- (1) OBSERVED FREQUENCY
- (2) EXPECTED FREQUENCY
- (3) CHI SQUARE RESIDUAL
- (4) ROW TOTAL
- (5) TABLE PERCENTAGE
- (6) COLUMN PERCENTAGE
- (7) TABLE TOTAL

TABLE 3

An analysis of respondents' ranking of military career (survey response 9) by geographic location. Question 9: Reasons students join NJROTC.

## RESPONDENTS' RANKING OF MILITARY CAREER AS REASON FOR JOINING NJROTC

CITY	0	1	2	3	4	5	TOTAL
GLOUCESTER	27.0	18.0	4.0	6.0	7.0	4.0	66.0
	23.4	14.8	7.4	7.4	5.9	7.1	29.6%
	3.6	3.2	-3.4	-1.4	1.1	-3.1	
NORFOLK	37.0	19.0	15.0	8.0	7.0	14.0	100.0
	35.4	22.4	11.2	11.2	9	10.8	44.8%
	1.6	-3.4	3.8	-3.2	-2	3.2	
VA BEACH	15.0	13.0	6.0	11.0	6.0	6.0	57.0
	20.2	12.8	6.4	6.4	5.1	6.1	25.6%
	-5.2	0.2	-0.4	4.6	0.9	-0.1	
=====							
TOTAL	79.0	50.0	25.0	25.0	20.0	24.0	223.0
	35.4%	22.4%	11.2%	11.2%	9.0%	10.8%	100.0%

$$\chi^2 = 13.6761; DF = 10; p = .1883^*$$

\*Statistical Significance  $p \leq .05$

decision to join NJROTC. The responses chosen most frequently were: a friend in NJROTC (29.6%), membership in the Sea Cadet Corps (23.3%), parent in the Navy (22.4%), school counselor (19.3%), and Naval person other than recruiter/other relative (17%). The sources of influence least frequently chosen were: The school newspaper (1.3%), coaches (1.8%), radio advertisement (2.2%), magazine ads (3.6%) and pieces of Navy mail (3.6%).

Other survey questions found to be relevant to the choosing NJROTC were numbers 11, 12, 17, 21, 22, 24 and 26. Survey Question 11 also summarized (Table 4) asked cadets to identify the single greatest influence on their decision to join NJROTC. Membership in the Sea Cadet Corps was rated as the single greatest influence by 22.4%, having a friend in NJROTC was reported as the single greatest influence by 14.8% of respondents, 11.7% reported the greatest influence to be having a parent in the Navy, school counselors were reported by 8.1% as the single greatest influence and 7.2% reporting having a relative other than a parent in the Navy to be the greatest influence.

Two questions (12 and 17) dealt with school perceptions of the NJROTC program. Survey Question 12 asked cadets how they felt NJROTC was viewed by the teachers and administrators of their schools. Seventy-eight of the cadets reported positive perceptions, 13.5% reported negative responses and 8.5% either failed to respond or made other comments. When asked if NJROTC was viewed

**TABLE 4****SUMMARY OF THE TOP FIVE RESPONSES TO SURVEY QUESTION 10: WHAT WERE THE MOST INFLUENTIAL SOURCES IN YOUR DECISION TO JOIN NJROTC?**

<u>INFLUENTIAL SOURCES</u>	<u>PERCENT</u>
A friend in NJROTC	29.6%
Membership in the Sea Cadet Corps	23.3%
School Counselor	19.3%
Someone in the Navy other than a recruiter	17.0%
Parent in the Navy	17.0%

**SUMMARY OF THE TOP FIVE RESPONSES TO SURVEY QUESTION 11: WHAT WAS THE SINGLE MOST INFLUENTIAL REASON YOU JOINED NJROTC?**

<u>INFLUENTIAL SOURCES</u>	<u>PERCENT</u>
Membership in the Sea Cadet Corps	22.4%
Parent in the Navy	11.7%
School Counselor	8.1%
Other relative	7.2%
A friend in NJROTC	4.8%

as one of the top three organizations in their school (Survey Question 17), 77.6% of the respondents said "yes", 12.1% said "no" and 10.3% did not respond.

Survey Questions 21 and 22 (Table 5) asked cadets to identify which aspects of NJROTC they most and least enjoyed. Because they were asked to identify five areas in each domain, percentages reported do not necessarily equal 100% for each question. Rankings are based on the total number of times an area was chosen, not just the number of times that area was ranked as the "number 1" choice. When asked in Survey Question 21 asked for areas which were most enjoyed, cadets chose ranking based on total number of times chosen- not just "number 1" rankings: Military drills (75.3%), Field trips (59.6), Hands-on training (49.8%), Boot camp (46.2%) and the Competitions (45.3%).

Survey Question 22 asked to identify which areas were least enjoyed. Cadets chose the following: Inspections (42.2%), Haircuts (41.7%), Wearing the uniform (37.2%), Meetings (35.9%), and Discipline (30.9%).

Survey Question 24 asked how parents of participants responded to the desire to join NJROTC. Respondents indicated that 73.1% of the parents approved of the decision to join, 13% of the parents suggested NJROTC, 5.8% preferred some other activity, 1.8% suggested that the cadets stay out of NJROTC and 6.3% did not answer this question.

**TABLE 5****SUMMARY OF THE TOP FIVE RESPONSES TO SURVEY QUESTION 21: WHAT ARE THE FIVE AREAS YOU ENJOY MOST ABOUT NJROTC?**

<u>AREAS MOST ENJOYED</u>	<u>PERCENT</u>
Military Drill	75.3%
Field Trips to Military Facilities	59.6%
Hands-on Training	49.8%
Boot Camp	46.2%
Competitions	45.3%

**SUMMARY OF THE TOP FIVE RESPONSES TO SURVEY QUESTION 22: WHAT ARE THE FIVE AREAS YOU ENJOY LEAST ABOUT NJROTC?**

<u>AREAS LEAST ENJOYED</u>	<u>PERCENT</u>
Inspections	42.2%
Haircuts	41.7%
Wearing a Uniform	37.2%
Meetings	35.9%
Discipline	30.9%

Survey Question 27 asked cadets to choose between social reasons and a belief that NJROTC participation would assist them with college or military experiences. Eleven and seven-tenths percent of the cadets indicated social reasons, 39.5% indicated a belief that NJROTC participation would benefit their college or military careers, 44.8% chose both reasons, 4% chose neither of the two choices.

Research Question Two:

To what extent did the NJROTC Program meet its stated goals as perceived by the cadets

Those goals, in short, were to help high school students become better informed, responsible citizens and to positively impact Naval recruiting efforts. The stated goal of producing better informed, responsible citizens is addressed by Survey Questions 40, 41, 42, 44, 46, 47 and 49. The second goal of positively impacting Naval recruiting efforts is addressed by Survey Questions 31 and 27.

Survey Question 40 asked cadets if they felt they had matured because of the NJROTC experience. Eighty and three-tenths percent indicated they had matured because of the experience, 16.6% felt they had not increased their maturity and 3.1% did not respond.

Most respondents to Survey Question 41 indicated an increased awareness of the need for their participation in community service. Of the respondents, 77.6% replied positively, 19.3% responded negatively and 3.1% did not respond.

Survey Question 42 asked if the cadets felt an increased respect for authority. Eighty-two and one-tenths percent said "yes", 13.5% said "no" and 4.4% did not respond.

Survey Question 44 inquired about changes in the students' grade point averages. Of the 223 cadets, 67.7% reported an improvement, 17.5% reported a decline and 14.8% reported no change.

Table 6 presents the Chi Square analysis of the relationship between the respondents' reported change in Grade Point Average and geographic location. The  $X^2 = 17.2793$  with 4 degrees of freedom was found to be significant at the .0017 level which is less than the target of  $p \leq .05$ . This indicates a significant relationship between the reported perception of change in GPA and the geographic location of the respondent.

Survey Question 46 asked how NJROTC participation had affected how they felt about themselves. Seventy and four-tenths percent reported a more positive view, 6.7% reported a less positive view, 19.7% reported no change in perception and 3.1% did not respond to the question.

TABLE 6

An analysis of respondents' reported change in GPA as a result of participation in NJROTC (Survey question 44)

CITY	NO RESPONSE	IMPROVED	DECLINED	TOTAL
GLOUCESTER	4.0	43.0	19.0	66.0
	9.8	44.7	11.5	29.6%
	-5.8	-1.7	7.5	
NORFOLK	17.0	75.0	8.0	100.0
	14.8	67.7	17.5	44.8%
	2.2	7.3	-9.5	
VIRGINIA BEACH	12.0	33.0	12.0	57.0
	8.4	38.6	10.0	25.6%
	3.6	-5.6	2.0	
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TOTAL	33.0	151.0	39.0	223.0
	14.8%	67.7%	17.5%	100.0%

$$\chi^2 = 17.2793; \quad DF = 4; \quad p = .0017^*$$

\* STATISTICAL SIGNIFICANCE:  $p \leq .05$

Survey Question 47 asked if cadets felt they had become more responsible as a result of the NJROTC participation. Eight-three and nine-tenths percent felt they had become more responsible persons, 12.6% reported they had not become more responsible and 3.6% did not respond.

Table 7 presents the Chi Square analysis of the relationship between the respondents' reported change in their sense of responsibility and geographic location. The  $X^2 = 13.2511$  with 4 degrees of freedom was found to be significant at the .0101 level which is less than the target of  $p \leq .05$ . This indicates a significant relationship between the reported change in cadets' sense of responsibility and geographic location.

Finally, Survey Question 49 asked to indicate whether the NJROTC experience had caused cadets to want more leadership roles. Eighty-seven and nine-tenths percent indicated an increased desire for leadership, 9% indicated no increased desire for leadership and 3.1% did not respond.

The impact of NJROTC on Naval recruiting, although not a stated goal, was addressed in Survey Questions 31 and 27.

Survey Question 27 asked cadets to choose between social reasons and a belief that NJROTC participation would assist them with college or military experiences. Eleven and seven-tenths percent indicated social reasons, 39.5%

TABLE 7

An analysis of respondents' reported change in cadets' sense of responsibility as a result of participation in NJROTC (Survey question 47)

CITY TOTAL	NO RESPONSE	YES	NO
GLOUCESTER 66.0	1.0	49.0	16.0
29.6%	2.4	55.3	8.3
	-1.4	-6.3	7.7
NORFOLK 100.0	4.0	90.0	6.0
44.8%	3.6	83.9	12.6
	0.4	6.1	-6.6
VIRGINIA BEACH 57.0	3.0	48.0	6.0
25.6%	2.0	47.8	7.2
	1.0	-0.2	-1.2
=====			
TOTAL 223.0	8.0	187.0	28.0
100.0%	3.6%	83.9%	12.6%

$$X^2 = 13.2511; \quad DF = 4; \quad p = .0101^*$$

-----

\* STATISTICAL SIGNIFICANCE:  $p \leq .05$

indicated a belief that NJROTC participation would benefit their college or military careers, 44.8% chose both reasons, 4% chose neither of the two choices.

Table 8 presents the Chi Square analysis of the relationship between respondents' reported reasons for joining the NJROTC and geographic location. The  $X^2 = 15.8502$  with 8 degrees of freedom was found to be significant at the .0446 level which is less than the target of  $p \leq .05$ . This indicates a significant relationship between the cadets' reported reasons for joining NJROTC and geographic location.

Survey Question 31 asked cadets to code their post-secondary plans. Respondents indicated their plans were: 27.4% planned other military careers, 14.3% planned naval careers, 39% planned to attend a four-year college, 3.6% planned to attend a trade school, 7.2% planned to attend a two year college, 3.6% planned for civilian jobs and 4.9% did not indicate their post-secondary plans.

In an effort to determine if the 15% plus of the cadet respondents who expressed a lack of growth after the NJROTC experience were a single cohort, a crosstabulation of all demographic variables (Survey Questions 2-8) was run against all satisfaction and growth variables (Survey Questions 40-49). Chi Square statistics were generated. This particular analysis found some significant tables but no significant patterns. For example, the crosstab of age by maturity

TABLE 8

An analysis of respondents' reported reasons for joining NJROTC (Survey question 27)

CITY	NO RESPONSE	SOCIAL REASONS	FUTURE HELP	BOTH	NEITHER	TOTAL
GLOUCESTER	2.0	12.0	22.0	28.0	2.0	66.0
	1.8	7.7	26.0	29.6	0.9	29.6%
	0.2	4.3	-4.0	-1.6	1.1	
NORFOLK	0.0	11.0	40.0	49.0	0.0	100.0
	2.7	11.7	39.5	44.8	1.3	44.8%
	-2.7	-0.7	0.5	4.2	-1.3	
VIRGINIA BEACH	4.0	3.0	26.0	23.0	1.0	57.0
	1.5	6.6	22.5	25.6	0.8	25.6%
	2.5	-3.6	3.5	-2.6	0.2	

=====  
 $\chi^2 = 15.8502; \quad DF = 8; \quad p = .0446^*$   
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\* STATISTICAL SIGNIFICANCE:  $p \leq .05$

produced a significant Chi Square at the .03 level with 10 degrees of freedom, however, no significant patterns were discerned.

Research Question Three:

What demographic characteristics are associated with high school students who participate in NJROTC?

Survey Questions 1, 2, 3, 4, 6, 7, 8, 16, 18, 20, 25, 36 and 37 address the question of demographics.

The analysis of Survey Question 1 found 29.6% of the respondents to be a rural county with the remaining 70.4% coming from metropolitan areas. Responses to Survey Question 2 revealed the majority of the respondents (72.2%) to be between 14 and 16 years old with the single largest group represented being 15 year-olds (57 respondents for 25.6%).

Table 9 presents the Chi Square analysis of the relationship between respondents' reported ages and geographic location. The  $X^2 = 37.1625$  with 10 degrees of freedom was found to be significant at the .0001 level which is less than the target of  $p \leq .05$ . This indicates a significant relationship between the cadets' reported ages and geographic location.

Table 10 presents the Chi Square analysis of the relationship between respondents' reported number of hours worked per week and geographic

TABLE 9

An analysis of respondents' reported ages (Survey question 2)

CITY	NO RESPONSE	14 YRS	15 YRS	16 YRS	17 YRS	18 YRS	TOTAL
GLOUCESTER	0.0	10.0	21.0	16.0	11.0	8.0	66.0
	0.3	14.8	16.9	16.0	11.2	6.8	29.6%
	-0.3	-4.8	4.1	0.0	-0.2	1.2	
NORFOLK	0.0	35.0	28.0	22.0	12.0	3.0	100.0
	0.4	22.4	25.6	24.2	17.0	10.3	44.8%
	-0.4	12.6	2.4	-2.2	-5.0	-7.3	
VIRGINIA BEACH	1.0	5.0	8.0	16.0	15.0	12.0	57.0
	0.3	12.8	14.6	13.8	9.7	5.9	25.6%
	0.7	-7.8	-6.6	2.2	5.3	6.1	
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TOTAL	1.0	50.0	57.0	54.0	38.0	23.0	223.0
	0.4%	22.4%	25.6%	24.2%	17.0%	10.3%	100.0%

$$\chi^2 = 37.1625; \quad DF = 10; \quad p = .0001^*$$

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\* STATISTICAL SIGNIFICANCE:  $p \leq .05$

location. The  $X^2 = 35.3630$  with 8 degrees of freedom was found to be significant at the .0001 level which is less than the target of  $p \leq .05$ . This indicates a significant relationship between the respondents' reported number of hours worked per week and geographic location.

Survey Question 3 found that most of the respondents (57.8%) did not work.

Freshmen, in Survey Question 4, were the single largest (42.6%) grade level classification of the respondents.

Table 11 presents the Chi Square analysis of the relationship between respondents' reported grade level and geographic location. The  $X^2 = 32.4955$  with 6 degrees of freedom was found to be significant at the .0001 level which is less than the target of  $p \leq .05$ . This indicates a significant relationship between reported grade levels and geographic location.

Survey Question 6 found whites to be the ethnic group with the largest (59.2%) representation.

Table 12 presents the Chi Square analysis of the relationship between respondents' reported ethnic group membership and geographic location. The  $X^2 = 51.6311$  with 10 degrees of freedom was found to be significant at the .0001 level which is less than the target of  $p \leq .05$ . This indicates a significant relationship between reported ethnic group membership and geographic location.

TABLE 10

An analysis of respondents' reported number of hours worked per week (Survey question 3)

CITY	NO RESPONSE	10 OR LESS	10-20	20 OR MORE	NONE	TOTAL
GLOUCESTER	0.0	11.0	7.0	17.0	31.0	66.0
	0.6	5.9	6.2	15.1	38.2	29.6%
	-0.6	5.1	0.8	1.9	-7.2	
NORFOLK	2.0	5.0	8.0	10.0	75.0	100.0
	0.9	9.0	9.4	22.9	57.8	44.8%
	1.1	-4.0	-1.4	-12.9	17.8	
VIRGINIA BEACH	0.0	4.0	6.0	24.0	23.0	57.0
	0.5	5.1	5.4	13.0	33.0	25.6%
	-0.5	-1.1	0.6	11.0	-10.0	
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	2.0	20.0	21.0	51.0	129.0	223.0
	0.9%	9.0%	9.4%	22.9%	57.8%	100.0%

$$\chi^2 = 35.3630; \quad DF = 8; \quad p = .0001^*$$

\* STATISTICAL SIGNIFICANCE:  $p \leq .05$

TABLE 11

An analysis of respondents' reported grade level (Survey question 4)

CITY	FRESHMAN	SOPHOMORE	JUNIOR	SENIOR	TOTAL
GLOUCESTER	30.0	11.0	16.0	9.0	66.0
	28.1	14.2	14.5	9.2	29.6%
	1.9	-3.2	1.5	-0.2	
NORFOLK	58.0	17.0	15.0	10.0	100.0
	42.6	21.5	22.0	13.9	44.8%
	15.4	-4.5	-7.0	-3.9	
VIRGINIA BEACH	7.0	20.0	18.0	12.0	57.0
	24.3	12.3	12.5	7.9	25.6%
	-17.3	7.7	5.5	4.1	
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	95.0	48.0	49.0	31.0	223.0
	42.6%	21.5%	22.0%	13.9%	100.0%

$$\chi^2 = 32.4955; \quad DF = 6; \quad p = .0001^*$$

\* STATISTICAL SIGNIFICANCE:  $p \leq .05$

TABLE 12

An analysis of respondents' reported ethnic group membership (Survey question 6)

CITY	NO RESPONSE	BLACK	WHITE	HISPANIC	A INDIAN	OTHER	TOTAL
GLOUCESTER	0.0	8.0	52.0	1.0	4.0	1.0	66.0
	0.6	17.8	39.1	2.7	1.2	4.7	29.6%
	-0.6	-9.8	12.9	-1.7	2.8	-3.7	
NORFOLK	0.0	42.0	40.0	7.0	0.0	11.0	100.0
	0.9	26.9	59.2	4.0	1.8	7.2	44.8%
	-0.9	15.3	-19.2	3.0	-1.8	3.8	
VIRGINIA BEACH	2.0	10.0	40.0	1.0	0.0	4.0	57.0
	0.5	15.3	33.7	2.3	1.0	4.1	25.6%
	1.5	-5.3	6.3	-1.3	-1.0	-0.1	
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	2.0	60.0	132.0	9.0	4.0	16.0	223.0
	0.9%	26.9%	59.2%	4.0%	1.8%	7.2%	100.0%

$$\chi^2 = 51.6311; \quad DF = 10; \quad p = .0001^*$$

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\* STATISTICAL SIGNIFICANCE:  $p \leq .05$

Males, as revealed by responses to Survey Question 7, represented 70.9% of the respondents.

Responses to Survey Question 8 showed that the majority of the respondents (74.4%) had attended only one high school during their school careers.

Table 13 presents the Chi Square analysis of the relationship between respondents' reported number of high schools attended and geographic location. The  $X^2 = 22.7874$  with 6 degrees of freedom was found to be significant at the .0009 level which is less than the target of  $p \leq .05$ . This indicates a significant relationship between reported number of high schools attended by the respondents and geographic location.

Table 14 is a summary of the top five responses to Survey Question 16 where cadets reported a fairly low level of participation in the other organizations. Thirty and nine-tenths percent reported participation in some activity other than those listed, 21.1% reported participation in varsity sports, 9.9% participated in church clubs, 8.5% reported participation in scouting activities, and 6.7% participated in their school's band or orchestra.

Survey Question 18 asked cadets to identify whether they held leadership position in the organizations in which they were participants. Twenty-six

TABLE 13

An analysis of respondents' reported number of high schools attended (Survey question 8)

CITY	NO RESPONSE	ONE	ONE OTHER	TWO OR MORE	TOTAL
GLOUCESTER	1.0	56.0	5.0	4.0	66.0
	0.6	49.1	10.1	6.2	29.6%
	0.4	6.9	-5.1	-2.2	
NORFOLK	1.0	80.0	13.0	6.0	100.0
	0.9	74.4	15.2	9.4	44.8%
	0.1	5.6	-2.2	-3.4	
VIRGINIA BEACH	0.0	30.0	16.0	11.0	57.0
	0.5	42.4	8.7	5.4	25.6%
	-0.5	-12.4	7.3	5.6	
	2.0	166.0	34.0	21.0	223.0
	0.9%	74.4%	15.2%	9.4%	100.0%

$$\chi^2 = 22.7874; \quad DF = 6; \quad p = .0009^*$$

\* STATISTICAL SIGNIFICANCE:  $p \leq .05$

TABLE 14

**SUMMARY OF TOP FIVE RESPONSES TO SURVEY QUESTION 16: TO WHICH ORGANIZATIONS DO YOU BELONG?**

<u>ORGANIZATIONS</u>	<u>PERCENT</u>
Does not apply	30.9%
Varsity sports	21.1%
Church club groups	9.9%
Scouts	8.5%
Band or orchestra	8.5%

percent reported holding leadership positions in NJROTC, 8.1% reported holding leadership positions in the scouting activities, 6.7% reporting leadership positions in sports activities, 6.3% said they were church club leaders and 5.8% reported various levels of leadership in the Sea Cadets Corps.

Survey Question 20 asked cadets to describe their current high school programs. The largest single group was those cadets who identified their high school programs as being a general track (43.5%), 35.9% identified their programs as college prep, 11.2% described their programs as vocational and the remaining 9.4% either did not respond or described their program as something other than the three main categories.

Another characteristic of the participants was revealed by responses to Survey Question 25, where it was found that 79.4% of the respondents had one or both parents in the military.

Table 15 presents the Chi Square analysis of the relationship between respondents' reported parental involvement in the military and geographic location. The  $X^2 = 17.2163$  with 6 degrees of freedom was found to be significant at the .0085 level which is less than the target of  $p \leq .05$ . This indicates a significant relationship between reported parental involvement in the military and geographic location.

TABLE 15

An analysis of respondents' reporting one or both parents in the military  
(Survey question 25)

CITY	NO RESPONSE	MOTHER	FATHER	BOTH	TOTAL
GLOUCESTER	16.0	6.0	37.0	7.0	66.0
	13.6	5.6	42.6	4.1	29.6%
	2.4	0.4	-5.6	2.9	
NORFOLK	26.0	10.0	58.0	6.0	100.0
	20.6	8.5	64.6	6.3	44.8%
	5.4	1.5	-6.6	-0.3	
VIRGINIA BEACH	4.0	3.0	49.0	1.0	57.0
	11.8	4.9	36.8	3.6	25.6%
	-7.8	-1.9	12.2	-2.6	
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	46.0	19.0	144.0	14.0	223.0
	20.6%	8.5%	64.6%	6.3%	100.0%

$$\chi^2 = 17.2163; \quad DF = 6; \quad p = .0085^*$$

\* STATISTICAL SIGNIFICANCE:  $p \leq .05$

While whether or not cadets had siblings did not vary significantly between geographic locations, the relative age of those siblings was found to be significantly different. Survey Question 36 showed that 34.5% of the respondents had brothers older than themselves and 12.6% had brothers both older and younger.

Table 16 presents the Chi Square analysis of the relationship between respondents' reported age of cadets' brothers and geographic location. The  $X^2 = 17.0702$  with 6 degrees of freedom was found to be significant at the .0090 level which is less than the target of  $p \leq .05$ . This indicates a significant relationship between the relative age of cadets' brothers and geographic location.

Survey Question 37 revealed that 35% of the respondents had sisters older than themselves and 7.2% had sisters both older and younger. The single largest percentage of the cadets responding to the survey (37.7%) did not respond to this question.

Table 17 presents the Chi Square analysis of the relationship between respondents' reported age of cadets' sisters and geographic location. The  $X^2 = 13.0370$  with 6 degrees of freedom was found to be significant at the .0425 level which is less than the target of  $p \leq .05$ . This indicates a significant relationship between the relative age of cadets' sisters and geographic location. This analysis reveals a significant relationship between the variables across the

TABLE 16

An analysis of respondents' reporting the relative age of their brothers (Survey question 36)

CITY	NO RESPONSE	OLDER	YOUNGER	BOTH	TOTAL
GLOUCESTER	22.0 <sup>(1)</sup>	15.0	18.0	11.0	66.0 <sup>(4)</sup>
	20.4 <sup>(2)</sup>	14.5	22.8	8.3	29.6% <sup>(5)</sup>
	1.6 <sup>(3)</sup>	0.5	-4.8	2.7	
NORFOLK	29.0	26.0	29.0	16.0	100.0
	30.9	22.0	34.5	12.6	44.8%
	-1.9	4.0	-5.5	3.4	
VIRGINIA BEACH	18.0	8.0	30.0	1.0	57.0
	17.6	12.5	19.7	7.2	25.6%
	0.4	-4.5	10.3	-6.2	
	69.0 <sup>(6)</sup>	49.0	77.0	28.0	223.0 <sup>(7)</sup>
	30.9%	22.0%	34.5%	12.6%	100.0%

$$\chi^2 = 17.0720; \quad DF = 6; \quad p = .0090^*$$

\* STATISTICAL SIGNIFICANCE:  $p \leq .05$

- TABLE LEGEND  
 (1) OBSERVED FREQUENCY  
 (2) EXPECTED FREQUENCY  
 (3) CHI SQUARE RESIDUAL  
 (4) ROW TOTAL  
 (5) TABLE PERCENTAGE  
 (6) COLUMN PERCENTAGE  
 (7) TABLE TOTAL

TABLE 17

An analysis of respondents' reporting the relative age of their sisters (Survey question 37)

CITY	NO RESPONSE	OLDER	YOUNGER	BOTH	TOTAL
GLOUCESTER	31.0	13.0	18.0	4.0	66.0
	24.9	13.3	23.1	4.7	29.6%
	6.1	-0.3	-5.1	-0.7	
NORFOLK	34.0	26.0	31.0	9.0	100.0
	37.7	20.2	35.0	7.2	44.8%
	-3.7	5.8	-4.0	1.8	
VIRGINIA BEACH	19.0	6.0	29.0	3.0	57.0
	21.5	11.5	19.9	4.1	25.6%
	-2.5	-5.5	9.1	-1.1	
	84.0	45.0	78.0	16.0	223.0
	37.7%	20.2%	35.0%	7.2%	100.0%

$$\chi^2 = 13.0370; \quad DF = 6; \quad p = .0425^*$$

\* STATISTICAL SIGNIFICANCE:  $p \leq .05$

table, however, the procedure used was not robust enough to allow for statements of causation. This analysis can and should be used for justification for further study of the relationship between the two variables.

Research Question Four:

What experiences prior to NJROTC are associated with participation?

This research question was addressed by survey questions 10, 13, 38.

Survey Question 10 listed 24 possible influences on the decision to join NJROTC. The five most frequently chosen responses were: A friend in NJROTC (29.6%), Membership in the Sea Cadet Corps (23.3%), Parent in the Navy (22.4%), School counselor (19.3%), and Naval person other than recruiter/other relative (17%).

Table 18 presents the Chi Square analysis of the relationship between the influence of Sea Cadet membership on the decision to join NJROTC and geographic location. The  $X^2 = 11.2425$  with 4 degrees of freedom was found to be significant at the .0240 level which is less than the target of  $p \leq .05$ . This indicates a significant relationship between the influence of Sea Cadet membership on the decision to join NJROTC and geographic location. The implication here is that in Norfolk the recruiting efforts should focus more on strengthening and promoting the Sea Cadet Corps rather than in the other two

TABLE 18

An analysis of respondents' reporting the influence of Sea Cadet membership on decision to join NJROTC (Survey question 10)

CITY	NO RESPONSE	PRIMARY	SECONDARY	TOTAL
GLOUCESTER	47.0	18.0	1.0	66.0
	50.6	15.1	0.3	29.6%
	-3.6	2.9	0.7	
NORFOLK	86.0	14.0	0.0	100.0
	76.7	22.9	0.4	44.8%
	9.3	6.0	-0.3	
VIRGINIA BEACH	38.0	19.0	0.0	57.0
	43.7	13.0	0.3	25.6%
	-5.7	6.0	-0.3	
	171.0	51.0	1.0	223.0
	76.7%	22.9%	0.4%	100.0%

$$\chi^2 = 11.2425; \quad DF = 4; \quad p = .0240^*$$

\* STATISTICAL SIGNIFICANCE:  $p \leq .05$

cities studied because the analysis revealed that the Sea Cadet Corps membership in Norfolk exerted a stronger influence on cadets' decisions to join NJROTC than in the other two cities. It is not known if the other cities did or did not have a Sea Cadet Corps locally assigned.

Table 19 presents the Chi Square analysis of the relationship between the influence of the school counselor on the decision to join NJROTC and geographic location. The  $X^2 = 11.4817$  with 4 degrees of freedom was found to be significant at the .0217 level which is less than the target of  $p \leq .05$ . This indicates a significant relationship between the influence of the school counselor on the decision to join NJROTC and geographic location.

Survey Question 13 asked cadets to identify the first time they came in contact with an NJROTC Science Instructor. Of the cadets: 8.1% indicated a recruiting office, 0.9% indicated a phone call to the Naval League Council, 30.5% replied through a school activity, 0.9% indicated they had received some mail from the Naval science instructor, 3.6% had been visited by the instructor, 17% didn't remember, 37.7% replied other but did not indicate what "other" meant, and 1.8% did not respond to this question.

Survey Question 38 asked cadets if their prior experiences which influenced their decision to participate in NJROTC included a sibling's prior participation in the program. Of the respondents, 10.8% said yes, 83% said no,

TABLE 19

An analysis of respondents' reporting the influence of the school counselor on decision to join NJROTC (Survey question 10)

CITY	NO RESPONSE	PRIMARY	SECONDARY	TOTAL
GLOUCESTER	45.0	20.0	1.0	66.0
	53.3	12.4	0.3	29.6%
	-8.3	7.6	0.7	
NORFOLK	88.0	12.0	0.0	100.0
	80.7	18.8	0.4	44.8%
	7.3	-6.8	-0.4	
VIRGINIA BEACH	47.0	10.0	0.0	57.0
	46.0	10.7	0.3	25.6%
	1.0	-0.7	-0.3	
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	180.0	42.0	1.0	223.0
	80.7%	18.8%	0.4%	100.0%

$$\chi^2 = 11.4817; \quad DF = 4; \quad p = .0217^*$$

\* STATISTICAL SIGNIFICANCE:  $p \leq .05$

5.8% did not respond and 0.4% (1 respondent) indicated that they had both a brother and sister participate.

Research Question Five:

What aspects of NJROTC are associated with intentions to ascend into  
Navy ranks?

Survey Questions 21, 30, 46, 49 address this question.

When asked in Survey Question 21 for areas which were most enjoyed, students chose the following (ranking is based on total number of times chosen-not just "number 1" rankings): Military drills (75.3%), Field trips (59.6), Hands-on training (49.8%), Boot camp (46.2%) and the Competitions (45.3%).

Table 20 presents the Chi Square analysis of the relationship between the ranking of "hands-on" training as a "most" enjoyed area of NJROTC and geographic location. The  $X^2 = 19.3951$  with 10 degrees of freedom was found to be significant at the .0355 level which is less than the target of  $p \leq .05$ . This indicates a significant relationship between the ranking of "hands-on" training as a "most" enjoyed area of NJROTC and geographic location.

Survey Question 30 required cadets to evaluate 22 possible benefits of NJROTC participation. The top five were (as summarized in Table 21): The opportunity to do something meaningful with life (81.2%), Help in developing

TABLE 20

An analysis of respondents' ranking of hands on training as an enjoyed area of NJROTC (Survey question 21) with "1" being most enjoyed and "5" being least enjoyed.

CITY	NO RESPONSE	1	2	3	4	5	TOTAL
GLOUCESTER	31.0	12.0	4.0	9.0	7.0	3.0	66.0
	33.1	8.3	9.8	5.6	4.4	4.7	29.6%
	-2.1	3.7	-5.8	3.4	2.6	-1.7	
NORFOLK	48.0	14.0	17.0	8.0	6.0	7.0	100.0
	50.2	12.6	14.8	8.5	6.7	7.7	44.8%
	-2.2	1.4	2.2	-0.5	-0.7	-0.2	
VIRGINIA BEACH	33.0	2.0	12.0	2.0	2.0	6.0	57.0
	28.6	7.2	8.4	4.9	3.8	4.1	25.6%
	4.4	-5.2	3.6	-2.9	-1.8	1.9	
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	112.0	28.0	33.0	19.0	15.0	16.0	223.0
	50.2%	12.6%	14.8%	8.5%	6.7%	7.2%	100.0%

$$\chi^2 = 19.3951; \quad DF = 10; \quad p = .0355^*$$

\* STATISTICAL SIGNIFICANCE:  $p \leq .05$

TABLE 21

**SUMMARY OF TOP FIVE RESPONSES TO SURVEY QUESTION 30: WHAT BENEFITS CAN ONE GET FROM NJROTC?**

<u>TOP BENEFITS</u>	<u>PERCENT</u>
Gives you an opportunity to do something meaningful with your life	81.2%
Helps you develop yourself to your full potential	80.7%
Allows you to gain a lot of responsibility early in life	79.4%
Offers you the chance to become an effective leader	79.0%
Provides discipline in your life	77.6%

**SUMMARY OF BOTTOM FIVE RESPONSES TO SURVEY QUESTION 9: REASONS STUDENTS JOIN NJROTC**

<u>REASONS FOR JOINING</u>	<u>PERCENT</u>
Teacher recommendation	1.8%
Desire to go to sea	2.7%
High school does not have NJROTC program	3.1%
To have fun	3.1%
Community does not have Sea Cadet program	4.9%

full potential (80.7%), Gaining increased responsibility at an early age (79.4%), Chance to become an effective leader (79%) and Provides a source of discipline (77.6%).

Survey Question 46 asked cadets how NJROTC participation had affected the way they felt about themselves. Seventy and four-tenths percent reported a more positive view, 6.7% a less positive view, 19.7% reported no change in perception and 3.1% did not respond to the question.

Finally, Survey Question 49 asked respondents to indicate whether the NJROTC experience had caused them to want more leadership roles. Of the respondents, 87.9% indicated an increased desire for leadership, 9% indicated no increased desire for leadership and 3.1% did not respond.

## CHAPTER 5

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The purpose of this study was to evaluate the influence of the Navy JROTC program on cadets in the program and to determine the extent to which it was effective in achieving its stated goals. Chapter 5 contains a summary of the study, a discussion of the findings, conclusions and recommendations.

#### Summary

The NJROTC program is a joint effort by the Navy and local school authorities to provide high school students with naval science information consistent with other fields in secondary education (ROTC Bulletin, June 1990). Since its modest beginning, the Navy program has expanded to 241 units and has a congressionally-authorized ceiling of 289 units. According to Operations Research, Inc. (1987), the value of the program in terms of its quality of curriculum, development of life skills with an emphasis on high goals, positive motivation and as an aid to better Navy recruitment, is fully appreciated by Congress and the Department of Defense. They appropriated over 10 million dollars in salaries and administrative costs alone in 1989 (ROTC Bulletin, June 1990). The program has a highly positive ongoing commitment to the

development of the nation's young people. NJROTC is considered to be a vital cornerstone of the Chief of Naval Operation's program on personal excellence and national security (Admiral James Watkins, June 23, 1986).

NJROTC is a Department of Defense funded, voluntary training program for high school men and women ages 14 through 17. The Junior ROTC program can be traced back to its Army origins in 1911. Today, the Army, Navy, Marine Corps and Air Force combined have 1,479 Junior ROTC units with over 219,000 cadets. The Navy's Junior ROTC program began with the congressionally-mandated ROTC Vitalization Act of 15 October 1964 (PUBLIC LAW 88-647). Although the first Naval JROTC unit was not established until 1966 and was originally limited to male participants, the law was amended in 1973 to encourage full participation by female cadets, and today's Navy Cadet Corps is made up of over 30,000 students including 10,000 young women (U.S. Naval Institute Proceedings, Vol. 99, August 1973, pp. 50-55).

NJROTC was established in 1966, and intended by Congressional charter to influence high school students to become better informed, more responsible citizens (Public Law 88-647) and to have an impact on naval recruiting (All Hands, June 1987). To date, however, a method to determine why students join NJROTC has not been developed. Furthermore, because recruiting is not a specifically stated objective of the NJROTC program in its congressional charter,

there had been little impetus to develop an instrument that could measure the effect of the NJROTC program on Navy accessions. Hence, this study was developed and conducted to evaluate selected aspects of the NJROTC program and to provide a determination of why high school students join and remain in NJROTC. A survey instrument was created to ascertain that information.

The focus of this study was to investigate factors related to participation and evaluate the motivation of students who join NJROTC and remain in the program until graduation, and whether the NJROTC curriculum met the congressionally stated goals as perceived by the cadets.

This study evaluated the NJROTC program using five research questions:

- (1) Why do high school students join and remain in NJROTC?
- (2) To what extent did the NJROTC Program meet its stated goals as perceived by the cadets?
- (3) What demographic characteristics are associated with high school students who participate in NJROTC?
- (4) What experience prior to involvement in NJROTC is associated with participation?
- (5) What aspects of the NJROTC are associated with intentions to ascend into Navy ranks?

No prior research had been conducted that had indicated whether or not NJROTC was meeting its current goals and objectives, i.e., promoting a

knowledge of the U.S. Navy's role in National Defense and providing leadership opportunity, nor that the program adequately justifies its present budget and/or requires additional funds to operate in the future.

Available historical recruiting data is based solely on a cadet's declared intention to join a particular branch of the service or to enroll in a college with a military affiliation such as the ROTC program or reserves. No data available is based upon follow-up studies or geographic limitations.

A review of the literature referencing the NJROTC program indicated that a significant number of youngsters joined military service after graduation from high school (Operations Research, Inc., 1973) and membership in an NJROTC unit and that stated program goals may have been effective in promoting patriotism, self reliance, individual discipline and leadership. That students are drawn to NJROTC is similar to their being drawn to other character building organizations. The NJROTC program has been tasked with influencing the conduct of its members and of establishing among them codes of conduct that exert a permanent influence in their lives with or without military service in their future.

If the goals the Navy desires for NJROTC are to be achieved, then it should be aware that each school climate differs, the motives to participate vary, and the individual personality of the group must be considered to provide for those innate differences. Additionally, because the results of this research could

be relevant to the NJROTC program nationally, the data might be instrumental in:

1. Facilitating growth within the program and encouraging NJROTC staff to implement relevant changes where necessary.
2. Helping Chief of Naval Education and Training personnel in developing effective techniques and skills in initiating new curriculum or improving existing ones.
3. Providing a basis for better and more appropriate decisions regarding the expansion of the program to more students who need this type of program.
4. Helping public school administrators with respect to decisions regarding the value received for financial and other support for the programs.
5. Consideration of amending Public Law 88-647 to include recruiting as an explicitly stated objective of the NJROTC program.

The design of this study was to see if there was evidence of the NJROTC program meeting its stated goals. In order to do this a descriptive research design was employed. Descriptive research is primarily concerned with existing conditions or situations. As such, it is a structured attempt to obtain facts and opinions about those existing conditions.

A questionnaire was administered to three school NJROTC programs that surveyed 223 students. The survey gathered information on student demographics, associated motivational factors, future scholastic and professional goals and perceptions of curriculum goals as noted by cadets in relation to what is stated in the NJROTC charter. This was a paper and pencil instrument asking 49 questions, both demographic and attitudinal. The purpose of this questionnaire was to provide answers to research questions 1-5. Some of the questions were yes/no answers and about one-half were multiple choice. Directions were administered to each NJROTC class being surveyed by the author, and the survey time to completion was between 15 and 30 minutes. The author personally instructed all students on the purpose of their surveys and gave directions on filling them out. All cadets received the same instructions and forms. All students in each NJROTC unit at each school were surveyed the same week. Absentees were not re-surveyed. Units generally consist of 75 or more students each. All surveys were completed in June 1991, with the schools being surveyed during the last week of class prior to summer recess.

The subjects of this study were NJROTC cadets. The NJROTC cadets were from three Virginia high school in three separate school districts that have accredited NJROTC units. The cadets were both male and female in grades 9-12. Entire units were surveyed at each of the three schools. Racial mix and sex of the groups varied from school to school but every attempt was made with

the consent of the Commander of Naval Education and Training to pick three fairly similar NJROTC units based on race and number of cadets. The subjects reflected a varying socio-economic and academic background.

A statistical analysis of the data from the cadet survey was conducted to answer the major research questions. Chi Square analyses were employed to compare the three schools' results and other cross tabulations of interest. The descriptive statistics that were run for this study were frequency distributions and categorical percentages. A descriptive summary was provided for the surveys.

Analysis by geographic area/city was used because the study was one of NJROTC in selected schools, implying a comparison across those schools. Since all schools were in different cities/geographic areas, such an analysis was an actual comparison across schools. Further, the analysis was focused on differences in the responses which may have been related to geographic areas from which the respondents were selected. This study was descriptive in nature and as such requires caution in the generalization of the results. Results should, however, be used as the basis for further study under more controlled conditions.

## Summary of the Findings

### Research Question One:

#### Why do high school students join and remain in NJROTC?

A frequency distribution was run on survey questions 9, 10 and 11 to determine the five responses for each question that were chosen most often. Subsequently, a crosstabulation and Chi Square ( $X^2$ ) were run on each of the most frequently chosen selections from items 9, 10 and 11 by city of residence.

The top reasons why high students join NJROTC and remain in it are:

- To prepare for a future job.
- Because a friend was in NJROTC.
- School administrators and teachers viewed the program with positive perceptions.
- NJROTC was one of the top three organizations in school.
- Military drills and field trips.
- Parents approved of NJROTC.
- A belief that NJROTC would assist cadets with college or military careers.

In reviewing the primary reasons why students join NJROTC and remain in the program there were some obvious groupings of reasons.

To prepare for a future job and the belief that NJROTC would assist cadets with college or military careers indicates that students are concerned about their futures, even as freshmen, and that they are looking for options that will assist them with those concerns. NJROTC on the college level offers a number of full and partial scholarships as well as a monthly stipend for all cadets towards living expenses. Economically that would be a significant boost to many cadets, especially those from less affluent and minority backgrounds.

Involvement in NJROTC in high school and its associated military instruction make cadets the most likely recipients of ROTC scholarships or placement in the program with its financial assistance. The military academies also look first to NJROTC when they consider placement in their freshman classes because of pre-military familiarization and also an advanced academic background in military sciences.

Sixty-seven and seven-tenths percent of NJROTC cadets indicated that their grade point average improved as a result of NJROTC. This would imply that a cadet's chances of selection to a college were enhanced, as were future employment possibilities both in the military and civilian sectors.

It is well known that the military has an extensive package of educational benefits and technical training available to its members. Therefore, it would seem reasonable to assume that many cadets reason that if they increase their chances of acceptance into the military they would also increase their potential

to secure those benefits which additionally include post-career college tuition assistance known as the G.I. Bill.

Responses to the survey questions related to Research Question #1 also indicated that the positive perception of "others" was important to students joining and remaining in NJROTC. "Others" in this case were friends already involved with NJROTC, approving parents, school administrators, and teachers, all of whom had positive perceptions of the program. Students obviously cared about what others thought about their intended or current participation in NJROTC.

It was interesting to note that military drills and field trips related significantly to the intention to join or remain in NJROTC. In a day and age when school field trips in general have been scaled way back due to the expense of buses and insurance, NJROTC offers an appealing alternative. Most NJROTC units have their own military bus and Naval Science Instructors are usually licensed and insured to drive those buses. Cadets are allowed to fly on government aircraft to approved NJROTC activities. This gives them mobility far above and beyond that of other school based voluntary clubs. Also, all uniforms are provided free as are expenses when traveling. Cadets stay on a military base and eat in enlisted dining halls. When most other organizations are trying to raise money through their booster clubs, NJROTC cadets can already be on the road. A frequent reason for their travel are drill competitions between units both

in state and out, and, as discussed in Chapter Two, students naturally gravitate to competition and leadership challenges.

The reasons not selected as important to joining NJROTC are almost as relevant as those that were selected. It was apparent from the student responses that the Navy spends a lot of money trying to influence students to join NJROTC that were not considered important by those surveyed. Some of the reasons listed as not particularly influential were magazine Navy advertisements, Navy recruiter, Navy television and radio advertisement spots, and mailed recruitment information. Based on this data, the Navy might consider additional contact with the parents as important as well as providing information to school administrators and instructors.

Research Question Two:

To what extent did the NJROTC Program meet its stated goals as perceived by the cadets

Those goals, in short, were to help high school students become better informed, more responsible citizens. The stated goal of producing better informed, responsible citizens was addressed by Survey Questions 40, 41, 42, 44, 46, 47 and 49. The second goal of positively impacting Naval recruiting efforts was addressed by Survey Questions 31 and 27.

The responses to the survey questions showed that a preponderance of cadets believed NJROTC met its stated goals.

- 80.3% indicated they had matured because of NJROTC.
- 77.6% indicated an increased awareness of the need for their participation in community service.
- 82.1% of the cadets felt they had an increased respect for authority.
- 67.7% reported an improvement in their grade point average.
- 74.0% said participation in NJROTC made them feel better about themselves.
- 83.9% felt they had become more responsible because of NJROTC participation.
- 87.9% had an increased desire for leadership roles.

Although Naval recruiting is a perceived, not a stated goal of NJROTC:

- 39.5% indicated they joined NJROTC in the belief it would help them later with a college or military experience.
- 27.4% planned a military career other than the Navy.
- 14.3% planned a naval career.

Thirty-nine and one-half percent of the cadets indicated they joined NJROTC in the belief it would help them later with college or military experience. As discussed earlier in reference to Research Question #1, they are correct in their belief that NJROTC can help, because being a cadet is advantageous when competing for college NROTC scholarships or placement in

an ROTC unit where unit size is limited and stipends for participation are paid. NJROTC cadets are given preferential placement in college ROTC, Academy acceptance and enlistment because of prior Naval Science instruction and pre-military experience. They have been basically pre-screened by being in high school NJROTC.

The fact that 27.4% planned a military career other than the Navy and that only 14.3% planned a naval career is not considered significant in the negative sense because

- recruitment is not a Congressionally stated goal.
- any accessions into the military are beneficial to the services involved and if some NJROTC cadets join other services then it is possible that Army or Air Force JROTC cadets join the Navy following graduation.
- Naval Recruiting considers any percentage over 3% joining the military either from NJROTC or Sea Cadets to be very positive.

In light of the fact that the military is downsizing by 25% before 1995, these numbers may rise as going into the service becomes more difficult and is possibly viewed as being more elitist.

Research Question Three:

What demographic characteristics are associated with high school students who participate in NJROTC?

Survey Questions 1, 2, 3, 4, 6, 7, 8, 16, 18, 20, 25, 36 and 37 address the question of demographics. The survey found 29.6% of the respondents to be from a rural county with the remaining 70.4% coming from metropolitan areas. This does not reflect population characteristics of Hampton Roads, only characteristics of the survey sampling that was done.

Student Age and Grade Level

The majority of the respondents (72.2%) were found to be between 14 and 16 years old with the single largest group represented being 15 year-olds (57 respondents for 25.6%). One cannot help but wonder why the largest portion of respondents were freshmen. Freshmen, in Survey Question 4, were the single largest (42.6%) grade level classification of the respondents. There are several very plausible explanations. When the survey was administered during the last week of school a portion of the cadets not available to take the survey were seniors ages 17 and 18. It would not be unreasonable to assume that a number of the upperclassmen, intending to graduate in only a few days, were either not attending school or skipped certain classes which they deemed as no longer necessary to finish and/or they were otherwise occupied with graduation related activities.

Another possible explanation for the preponderance of freshmen and lack of seniors might be that freshmen have a stronger need to belong to a structured group such as NJROTC than the older, more independent seniors. The seniors might feel they had outgrown the program and decided to self select out. As students grow they master not only academic skills but a number of the leadership and social experiences, and quite simply, the appeal of the NJROTC program therefore is probably stronger for freshmen who are looking for extra-curricular activities that offers personal growth and development.

It could also be that a certain segment feels their needs are not well served and decide to drop out of NJROTC. This could be instigated by a lack of appropriate role models, as in the Norfolk school, with the most significant attrition of older cadets, and where the majority of cadets were black while both Naval Science Instructors were white. Were these youth just unable to identify with the program's leaders or could it be that as they got older peer pressure to drop out increased? It is well known that gang violence is on the rise in inner cities and it might well be that minority youth are being subjected to pressure to drop out of establishment activities and run "with the crowd." We currently do not know how NJROTC is perceived in inner city schools. NJROTC cadets' image among peers probably varies significantly with school climate, and racial issues and differences could affect that climate.

Most of the respondents (57.8%) did not work. This is not particularly remarkable because the United States is in a recession and jobs are not easy to come by, especially for youth. In Norfolk a lesser number of cadets worked than in other cities, yet it had a higher attrition rate as cadets got older. An interesting possibility to ponder is whether there is a correlation between Norfolk being more economically disadvantaged, having a higher black cadet population, a higher dropout rate among older cadets and a necessity for this same group to have to work. Do they leave the program to try and work part-time out of sheer economic need. Their employment opportunities are in jobs that traditionally have less flexibility as they are in tasks for the lower skilled population. Also, cadets might find holding a part-time job difficult with the time required for NJROTC involvement.

### Ethnicity

Whites were found to be the ethnic group with the largest (59.2%) representation. Whites made up almost 60% of the NJROTC units' population, but that was comparable to the racial makeup of the schools involved.

### Gender

Males represented 70.9% of the respondents. Although they were by far the majority of cadets, the number of females in the program is remarkable considering that only 11% of the military are women and of that number only 1% are female officers. It needs to be noted that women have only been able to

participate in NJROTC since 1973, and since that time their participation has grown annually. Nationally about one-third of all NJROTC cadets are female. That figure would be comparable to the gender breakdown found at the units surveyed for this study.

### Family Military Involvement

Another characteristic of the participants was that 79.4% of the respondents had one or both parents in the military. This is significant because it shows what a strong influence military parents have on their children's NJROTC participation. It is common knowledge in the military that many a career service member is a second or third generation sailor or soldier. Military service is more than a job; in many respects it's a way of life and offers many securities that families learn to rely on. That reliance is probably not lost on children, even in the early high school years. Also, there is a natural tendency to try to emulate and model one's parents.

### Research Question Four:

#### What experiences prior to NJROTC are associated with participation?

This research question was addressed by survey questions 10, 13, 38.

The experiences prior to NJROTC most associated with participation were:

- A friend in NJROTC.
- Contact with an NJROTC instructor through a school activity.

- A sibling having been in the program.

Again, the survey responses show the importance of personal contacts versus an impersonal media introduction to NJROTC. This information would indicate that military public relations and recruiting money could be better spent on employing personalized human contacts for recruiting rather than mailouts, flyers, posters, billboards, magazines, radio and television advertisements. It also seems evident that the emphasis to recruit NJROTC cadets should be primarily school and home based.

#### Research Question Five:

What aspects of NJROTC are associated with intentions to ascend into  
Navy ranks?

Survey Questions 21, 30, 46, 49 address this.

The aspects most frequently associated with intentions to ascend were:

- Participation in military drills.
- The opportunity to do something meaningful in life.
- Better self concept in general
- Desiring to assume greater leadership roles.

The desire for personal growth appears to be a main attraction for ascension into Navy ranks because many youth are looking for relevancy and a

chance to expand their horizons as well as to prepare for a future job. It appears that cadets see the Navy as a way to those means.

### Conclusions

Problems apparent in evaluation studies, the scarcity of data on NJROTC programs, and the vague terms in which the program goals were written, with no real direct measures available, have made the development of general conclusions about NJROTC difficult, i.e. how do you evaluate patriotism? Based only on the data obtained from this study, the effectiveness of the NJROTC program can be demonstrated by the following indicators that relate to the four major goals as stated in their Congressional charter:

- To promote habits of orderliness and precision and to develop respect for constituted authority (67% reported improved grade point averages.)
- To promote patriotism (41.7% plan a military career.)
- To develop a high degree of personal honor, self-reliance, individual discipline and leadership (74.0% said NJROTC made them feel better about themselves; 80.3% indicated they were more mature because of NJROTC; 87.9% had an increased desire for leadership.)

- To provide a means for students to become better informed citizens in matters of national security and to develop a knowledge of and an appreciation for the U.S. Navy's role in the national defense structure (14.3% plan a Naval career.)

The data collected from the cadet survey could be instrumental in facilitating growth within the NJROTC program because it determined both attitudinally and demographically what some of the perceptions of cadets were and how those varied based upon race, age, sex, grade, and location. For instance, this study provided data that showed one inner city school had a significant number of black male youth attrite from its NJROTC unit. Understanding why this occurred would be a reason for future study. It brings to mind the possibility that one particular sub-group of NJROTC may not be well served and, subsequently, self selects out of the program because it may not be individualized enough and/or a particular cultural gap could exist due to the program's insensitivity to a sub-group's needs. In this school, even though the majority of cadets were black, both Naval Science Instructors were white. This could indicate a lack of appropriate role models which might be an issue in the minority cadet dropout rate.

The NJROTC program must be responsive to the population it serves or it will not be able to attract and retain quality cadets. As the Navy downsizes, it needs technical personnel of high capability and potential that are prepared for a

broad base of tasking. If the Navy and its training headquarters hope to continue developing effective techniques and skills in initiating new curriculum and improving existing ones, then it must determine why its NJROTC program attracts a certain caliber cadet and why particular "sets" of those cadets stay in the corps and others drop out.

The students surveyed stated that a major reason for their continued affiliation with NJROTC were military drills. These drills seem to be a significant incentive to remain a cadet despite a demanding academic curriculum. While the act of drilling itself might not attract and hold the students, the field trips to distant and interesting locations that are in conjunction with that activity might. Military drills usually occur in an atmosphere of competition, excitement, new surroundings, and intense socialization. Considerations such as these and exploring other survey related data could give CNET a broadened foundation for decision making.

Personal contacts were of much greater importance in why students joined and remained in NJROTC than were other recruiting tools like television, magazine and radio ads. This leads the author to reason that the Navy should give serious consideration to how it allocates its recruiting resources budget.

More appropriate decisions on who are best suited to NJROTC and if the program meets cadet needs or if the NJROTC program should be expanded can be obtained from the survey's demographic data. Sixty-seven and seven-tenths

percent of NJROTC cadets indicated that their grade point averages improved. This should mean that consideration for NJROTC participation be given to students that are "academically at risk" but well qualified in other ways. It appears from the data that NJROTC helped cadets improve in a number of civic/social ways and that should be appealing, especially from a school administrator's perspective. Students, in general, indicated that their NJROTC experience had been very meaningful to them. Whenever a program generates such positive perceptions, it has value not only for the current program evaluation being done but future, more detailed studies.

Public school administrators, should find the evaluation data particularly relevant because they heavily subsidize NJROTC. All Naval Science Instructors draw from the Navy only their retirement pension. The school districts augment those monies with additional dollars that equal, when combined with the pension, what the instructor made when on active military duty. This is often more than some school districts pay some of their more senior school teachers. The schools also provide classroom space and all unit administrative and classroom supplies. While the findings from the survey indicate that cadet grades improved and they adopted a more mature, leadership filled, civic minded attitude, we don't know if graduation rates rose or to what extent reading levels might have improved. That information in combination with the survey data could be a big boon to schools looking for a strong correlation between student

improvement and specialized curricula and organizations. Administrators are always in search of what is most meaningful to students and will make them have a more successful school experience.

Consideration needs to be given to amending Public Law 88-647 to include recruiting as a stated goal of the NJROTC charter because it appears the program has a strong correlation with Navy recruiting and actual Navy accessions. Some of the responses that support the above conclusions are that 80.3% of cadets felt NJROTC had helped them become more aware of the need for community service, 70.4% felt more positive about themselves, 83% said they had become more responsible, 87.9% had an increased desire for leadership roles, 82.1% of the cadets felt they had an increased desire for authority, 67.7% reported an improvement in their grade point average, and 47.5% said their knowledge of the military and the results of the Persian Gulf War increased their desire for military service.

Currently Public Law 88-647 does not include recruiting as an explicitly stated goal but as the military reduces its end strength and budgets are slashed, any program that can provide recruitment at a bargain price (i.e. the public schools paying half or more of the program cost) will have congressional interest. Furthermore, adding recruiting to the NJROTC charter could provide for more effective use of recruiting dollars and help fund further research.

According to Operations Research Inc. (1973) the value of the program in terms of its quality of curriculum, development of life skills with an emphasis on high goals, positive motivation, and as an aid to Navy recruitment is fully appreciated by Congress and the Department of Defense. They appropriated over 10 million dollars in 1989 alone (ROTC Bulletin, June 1990). Making recruiting a stated goal and funding it appropriately would enable financial decision makers to more adequately allocate Navy advertising dollars spent on recruiting and to target that advertising most effectively.

The author, in discussions with school administrators and teachers during the survey process, was told that they value NJROTC programs in their schools because the units represent the school to the community, not only in parades and drill exhibitions but in a variety of public service and charitable efforts. They also believed that NJROTC might improve graduation rates by stimulating learning in other subjects and providing a context in which otherwise disaffected students find enough educational interest to encourage them to complete high school. They also felt NJROTC helped broaden students because it offered them field trips that were a form of education enrichment, especially for certain students who might otherwise be confined to their local communities.

### Recommendations for Further Research

1. It is recommended that a nationwide study be conducted of all NJROTC instructors to gather information on graduating senior cadets' intentions for further military service. This data would be more current and relevant to recruiting than the intentions of more junior cadets and it might also include and provide information on the demographics of cadets who remain involved in NJROTC from their freshman to senior years.
2. It is recommended that the survey instrument used in this research could be modified for Naval Science Instructors' use for the purpose of obtaining both demographic and attitudinal information on their part.
3. It is recommended that the U.S. Navy survey all new recruits to get accurate data on previous NJROTC affiliation or other JROTC affiliations.
4. It is recommended that a cross section of school principals of schools with NJROTC units be interviewed or surveyed with respect to their views on the value of NJROTC to their schools.
5. It is recommended that a study be conducted to evaluate nationally the effect of NJROTC on student reading levels and grade point averages.
6. It is recommended that an evaluation be developed that could address "possible image" problems by non-participants at certain schools and their effect on the NJROTC program. This is recommended because only NJROTC participants were surveyed vice the general school population,

and it is rather well known that perceptions of military association vary as with the swing of a pendulum. It seems that right now the pendulum's swing is favorable to the military but it would be interesting to run this survey again in the future during times of less positive military perceptions.

It is recommended that a cohort analysis be done to study why cadets remain and/or drop out of NJROTC. If the same kind of study were run at several schools each year for four years, it would be possible to make statements of causation regarding attrition and retention in the Corps. An important component of the cohort analysis would be a study of the students who dropped out of the program.

This study has potential value to both the Commander Naval Education and Training and the Commander of Naval Recruiting. Both commands operate in concert with reference to NJROTC and it could prove valuable in providing them a greater understanding of the perceptions of NJROTC cadets and what motivates their participation in NJROTC. That understanding could also lead to funding corrections and even to the changes in mandates of the NJROTC Congressional charter.

NJROTC is an important experience in the lives of thousands of young Americans in high school. I hope this study will contribute to ensuring that it remains a valuable experience to thousands more in the years to come.

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APPENDIX A  
SURVEY QUESTIONNAIRE

SURVEY QUESTIONNAIRE

1. City where you live: Gloucester 66 (29.6%)  
Norfolk 100 (44.8%)  
Virginia Beach 57 (25.6%)  
 City: \_\_\_\_\_
2. How old were you on your last birthday? (Mark one)
- ( ) a. 14 (22.4%)  
 ( ) b. 15 (25.6%)  
 ( ) c. 16 (24.2%)  
 ( ) d. 17 (17.0%)  
 ( ) e. 18 (10.3%)
3. How many hours per week do you work a job in which you get paid?
- ( ) a. 10 or less (9.0%)  
 ( ) b. 10 to 20 (9.4%)  
 ( ) c. 20 or more (22.9%)  
 ( ) d. I do not work (57.8%)
4. What is your present grade level in High School? (Mark one)
- ( ) a. Freshman (42.6%)  
 ( ) b. Sophomore (21.5%)  
 ( ) c. Junior (22.0%)  
 ( ) d. Senior (13.9%)
5. Besides Naval Junior ROTC, how many other extracurricular activities do you participate in?
- ( ) a. 3 or more (13.0%)  
 ( ) b. 2 (22.0%)  
 ( ) c. 1 (30.9%)  
 ( ) d. The Naval JROTC is my only one (34.1%)
6. What is your race? (Mark one)
- ( ) a. Black (26.9%)  
 ( ) b. White (59.2%)  
 ( ) c. Hispanic (4.0%)  
 ( ) d. American Indian (1.8%)  
 ( ) e. Other (SPECIFY) \_\_\_\_\_ (7.2%)

7. Are you            Male 70.9%            Female 28.3%
8. How many high schools have you attended?
- a. only this one            (74.4%)
  - b. one other            (15.2%)
  - c. two or more others (9.4%)
9. The following are some of the reasons why people join the Naval JROTC. Read them carefully and indicate in order the five most important reasons you joined NJROTC.  
(Number them 1, 2, 3, 4, 5) (1 = most important)
- a. To prepare for a future job            (37.7%)
  - b. To enter the military in an advanced paygrade            (20.2%)
  - c. To have a career in the military            (22.4%)
  - d. To get vocational or job training
  - e. To be in a high-tech (electronic, computer or other) program
  - f. To travel
  - g. To go to sea
  - h. A friend joined too
  - i. My parents recommended I join
  - j. To follow in an occupation of parents or relatives
  - k. My high school does not have a NJROTC program
  - l. My community does not have a Sea Explorer program
  - m. Want to go to the Naval Academy
  - n. Want to get an NROTC scholarship            (17.9%)
  - o. Like to wear the uniform
  - p. My teacher recommended I join
  - q. To have fun            (13.0%)
  - r. To join the military and become eligible for education and other benefits under the GI Bill
  - s. The summer training program
  - t. To fly
  - u. To eventually become a SEAL

10. Which one (1) of the following sources was most influential in your decision to join the Naval JROTC program? (Mark all that apply)

- a. My coach
- b. Magazine
- c. Magazine Navy ad
- d. Someone in the Navy other than a recruiter (17.0%)
- e. Parent in the Navy
- f. Other relative (17.0%)
- g. Teacher
- h. TV
- i. Radio
- j. School newspaper
- k. School poster
- l. Billboard
- m. School Counselor (19.3%)
- n. Navy recruiter
- o. Viewing a Navy film
- p. Piece of Navy mail
- q. Piece of Naval JROTC mail
- r. Event sponsored by the Navy (i.e. Blue Angels flight demonstration, Navy Band, Navy exhibit)
- s. Current events in newspaper, TV, or other source
- t. A book about the Navy
- u. A friend in the Naval JROTC (29.6%)
- v. Someone other than a friend I admired in the Naval JROTC
- w. Piece of Sea Cadet mail
- x. membership in Navy Sea Cadet Corps (23.3%)

11. From your answers to Question Number 10, what was the single most influential reason that you joined the NJROTC program?

- a. My coach
- b. Magazine
- c. Magazine Navy ad
- d. Someone in the Navy other than a recruiter
- e. Parent in the Navy (11.7%)
- f. Other relative (7.2%)
- g. Teacher

(Question continued on next page)

- h. TV  
 i. Radio  
 j. School newspaper  
 k. School poster  
 l. Billboard  
 m. School Counselor (8.1%)  
 n. Navy recruiter  
 o. Viewing a Navy film  
 p. Piece of Navy mail  
 q. Piece of Naval JROTC mail  
 r. Event sponsored by the Navy (i.e. Blue Angels flight demonstration, Navy Band, Navy exhibit)  
 s. Current events in newspaper, TV, or other source  
 t. A book about the Navy  
 u. A friend in the Naval JROTC (4.8%)  
 v. Someone other than a friend I admired in the Naval JROTC  
 w. Piece of Sea Cadet mail  
 x. membership in Navy Sea Cadet Corps (22.4%)
12. Do you feel that your school's teachers and administrators have a positive image of your NJROTC unit?
- a. Yes (78.0%)  
 b. No (13.5%)
13. How did you first come in contact with the Naval JROTC Science Instructor?
- a. I visited a Navy recruiting office (8.1%)  
 b. I telephoned the Naval League Council (0.9%)  
 c. I met the Naval Science Instructor through a school activity (30.5%)  
 d. The Naval Science Instructor telephoned me (0%)  
 e. The Naval Science Instructor mailed me some information (0.9%)  
 f. The Naval Science Instructor visited me (3.6%)  
 g. Don't remember (17.0%)  
 h. Other (SPECIFY) \_\_\_\_\_ (37.7%)  
Did not respond (1.8%)

14. Did you know you wanted to join the Naval JROTC before you spoke to a Naval Science Instructor?
- a. Yes (76.2%)
  - b. No (19.3%)
15. Are you a member of any organization besides the Naval JROTC?
- a. Yes (52.6%)
  - b. No (41.3%)
16. If yes, to which organization or organizations do you belong? (Mark all that apply)
- a. Air Force JROTC
  - b. Army JROTC
  - c. Navy Sea Cadet Corps
  - d. Marine Corps JROTC
  - e. Scouts (8.5%)
  - f. VICA
  - g. DECA
  - h. 4-H
  - i. FFA
  - j. Boys/Girls Club
  - k. Varsity sports (21.1%)
  - l. Band or orchestra (8.5%)
  - m. Debate or Drama Club
  - n. Honorary Club
  - o. School newspaper/yearbook
  - p. Subject Matter Club
  - q. Church Club (9.9%)
  - r. Student Council
  - s. Chorus
  - t. Boys/Girls State
  - u. Other
  - v. Not applicable (30.9%)

17. Do you think NJROTC is one of the top 3 school organizations to belong to?

- a. Yes (77.6%)
- b. No (12.1%)

18. Are you a leader in any of the following organizations? If so, what leadership positions have you held?

- a. JROTC (26.0%)
- b. Scouts (8.1%)
- c. VICA
- d. DECA
- e. 4-H
- f. FFA
- g. Boys/Girls Club
- h. Varsity sports (6.7%)
- i. Band or orchestra
- j. Chorus
- k. Debate or Drama Club
- l. School newspaper/yearbook
- m. Subject Matter Club
- n. Church Club (6.3%)
- o. Student Council
- p. Boys/Girls State
- q. Naval Sea Cadet Corps (5.8%)
- r. Not applicable

19. When did you first become aware of the NJROTC program?

- a. Freshman year of high school (24.2%)
- b. Sophomore year (7.6%)
- c. Junior year (4.5%)
- d. Senior year (0.9%)
- e. Before I got into high school (57.4%)

20. Which of the following best describes your present high school program?

- a. General (43.5%)
- b. Academic or College Preparatory (35.9%)
- c. Vocational (Occupational Preparation) (11.2%)

21. What are the five areas you enjoy most about the Naval JROTC? Number them with #1 being your favorite area, #2 being your 2nd favorite and so on. List only five.

- a. Military drill (75.3%)
- b. Hands-on training (49.8%)
- c. Field trips to military facilities (59.6%)
- d. Shipboard training
- e. Advanced training
- f. Boot camp (46.2%)
- g. Meetings
- h. Competitions (45.3%)
- i. Inspections
- j. Informal gatherings
- k. Wearing the uniform
- l. Presentations by Navy personnel
- m. Discipline
- n. Haircuts
- o. Other (SPECIFY) \_\_\_\_\_

22. What are the five areas you enjoy least about the Naval JROTC?  
(1 = enjoy the most)

- a. Military drill
- b. Hands-on training
- c. Field trips to military facilities
- d. Shipboard training
- e. Advanced training
- f. Boot camp
- g. Meetings (35.9%)
- h. Competitions
- i. Inspections (42.2%)
- j. Informal gatherings
- k. Wearing the uniform (37.2%)
- l. Presentations by Navy personnel
- m. Discipline (30.9%)
- n. Haircuts (41.7%)
- o. Other (SPECIFY) \_\_\_\_\_

23. What would be the five (5) most important changes you recommend to make the Naval JROTC better? (Pick 5) (1 = Most Important)
- a. A national convention
  - b. A competitive scholarship program
  - c. More publicity about your unit (59.2%)
  - d. More parental involvement
  - e. More members (55.6%)
  - f. Longer training (48.4%)
  - g. More outdoor activities such as camping, fishing, sports (66.4%)
  - h. More active duty support (53.8%)
  - i. More Navy League support
  - j. No change
24. How did your parents react to your wanting to join the Naval JROTC?
- a. They approved of it (73.1%)
  - b. They suggested it (13.0%)
  - c. They suggested some other activity (5.8%)
  - d. They suggested staying out of Naval JROTC (1.8%)
25. Is one or more of your parents in the military now or has ever been in the military and, if so, which parent or both?
- a. Mother (8.5%)
  - b. Father (64.6%)
  - c. Both (6.3%)
  - d. Neither (0%)
  - e. No response (20.6%)
26. Does the NJROTC help you know more about what you would like to do after graduating from high school?
- a. Yes (78.9%)
  - b. No (17.9%)

27. Did you join NJROTC for:

- a. Social reasons (11.7%)  
 b. It will help me get into college or the military later on (39.5%)  
 c. Both of the above (44.8%)

28. If you received mail what did you do with it? (Mark one)

- a. Answered it (25.6%)  
 b. Saved it after reading it (23.8%)  
 c. Saved it without reading it (4.0%)  
 d. Threw it away after reading it (17.0%)  
 e. Threw it away without reading it (3.1%)  
 f. Not applicable

29. Before you joined the Naval JROTC did you ever call the Navy's toll-free 800 number to request information from the Navy?

- a. Yes (8.1%)  
 b. No (85.7%)

30. Below are some statements that may or may not describe benefits that one could get from the Naval JROTC. Please read each statement and using a scale from 1 to 7, where 1 means you "strongly agree" and 7 means you "disagree completely," **circle the number** that best indicates **how you think** the statement applies to the Naval JROTC.

a. Gives you an opportunity to do something meaningful with your life (81.2%)

1      2      3      4      5      6      7

b. Helps you develop yourself to your full potential (80.7%)

1      2      3      4      5      6      7

c. Provides the opportunity for adventure and excitement

1 2 3 4 5 6 7

d. Enables you to be associated with a highly skilled team

1 2 3 4 5 6 7

e. Provides discipline in your life (77.6%)

1 2 3 4 5 6 7

f. Enables you to work with a high quality organization

1 2 3 4 5 6 7

g. Teaches you high tech skills

1 2 3 4 5 6 7

h. Helps you earn a lot of money in the future

1 2 3 4 5 6 7

i. Offers you the chance to become an effective leader (79.0%)

1 2 3 4 5 6 7

j. Enables you to live and work in a stable environment

1 2 3 4 5 6 7

k. Prepares you for the high-tech world of tomorrow

1 2 3 4 5 6 7

l. Prepares you for a secure future

1 2 3 4 5 6 7

m. Allows you to gain a lot of responsibility at an early age (79.4%)

1 2 3 4 5 6 7

n. Gives you an opportunity for a challenging career

1 2 3 4 5 6 7

o. Allows you to explore your career possibilities

1 2 3 4 5 6 7

p. Allows you to travel and see the world

1 2 3 4 5 6 7

q. Enables you to work toward a common goal with people you respect

1 2 3 4 5 6 7

r. Enables you to be associated with an organization rich in heritage and tradition

1 2 3 4 5 6 7

s. Offers you a chance to live for today and not worry about the future

1 2 3 4 5 6 7

t. Gives you the opportunity to earn the respect of your family and friends

1 2 3 4 5 6 7

u. Gives you the opportunity for a career you can be proud of

1 2 3 4 5 6 7

v. Helps you pay for a college education

1 2 3 4 5 6 7

31. What are your plans immediately after graduating from High School?  
(Pick only one)

- a. Enlist in the military other than the Navy (27.4%)
- b. Enlist in the Navy (14.3%)
- c. Four-year college (39.0%)
- d. Trade school (3.6%)
- e. Two-year college (7.2%)
- f. Civilian job (3.6%)

32. How long have you been a member of the Naval JROTC?

- a. less than 1 year (38.6%)
- b. 1-2 years (31.8%)
- c. 2-3 years (17.9%)
- d. 3-4 years (8.1%)

33. Have you taken or do you plan to take the SAT or ACT?

- a. Yes (32.7%)
- b. No (63.2%)

34. Have you taken or do you plan to take the Armed Services Vocational Aptitude Test?

- a. Yes (34.1%)
- b. No (62.3%)

35. Do you plan to remain in NJROTC until graduation?

- a. Yes (77.6%)
- b. No (19.3%)

36. Do you have any brothers?

- a. Yes (67.3%)     Older     Younger     Both
- b. No (29.1%)    (22.0%)    (34.5%)    (12.6%)

37. Do you have any sisters?

- a. Yes (61.0%)     Older     Younger     Both
- b. No (35.9%)    (20.2%)    (35.0%)    (7.2%)



44. Has your grade point average improved or declined since you joined NJROTC?
- a. Improved (67.7%)
  - b. Declined (17.5%)
  - c. No change (0%)
45. Has being in the NJROTC program increased your desire to stay in school until graduation?
- a. Yes (52.5%)
  - b. No (2.7%)
  - c. No change (41.3%)
46. Has participation in the NJROTC program affected the way you feel about yourself?
- a. More positive (70.4%)
  - b. Less positive (6.7%)
  - c. No change (19.7%)
47. Has participation in NJROTC helped you become a more responsible person?
- a. Yes (83.9%)
  - b. No (12.6%)
48. Do you prefer being a leader or a follower?
- a. Leader (82.5%)
  - b. Follower (11.7%)
49. Has NJROTC made you want to assume more leadership roles?
- a. Yes (87.9%)
  - b. No (9.0%)

APPENDIX B  
PUBLIC LAW 88-647

## CHAPTER 102—JUNIOR RESERVE OFFICERS' TRAINING CORPS

### Sec.

#### 2031. Junior Reserve Officers' Training Corps.

##### Historical Note

1964 Amendment. Pub.L. 88-647, Title I,  
§ 101(1), Oct. 13, 1964, 78 Stat. 1063, added  
item 2031 and the chapter heading.

#### § 2031. Junior Reserve Officers' Training Corps

(a) The Secretary of each military department shall establish and maintain a Junior Reserve Officers' Training Corps, organized into units, at public and private secondary educational institutions which apply for a unit and meet the standards and criteria prescribed pursuant to this section. Not more than 200 units may be established by all of the military departments each year beginning with the calendar year 1966, and the total number of units which may be established and maintained by all of the military departments under authority of this section, including those units already established on the date of enactment of this section, may not exceed 1,600. The President shall promulgate regulations prescribing the standards and criteria to be followed by the military departments in selecting the institutions at which units are to be established and maintained and shall provide for the fair and equitable distribution of such units throughout the Nation, except that more than one such unit may be established and maintained at any military institute.

(b) No unit may be established or maintained at an institution unless—

(1) the unit contains at least 100 physically fit students who are at least 14 years of age and are citizens or nationals of the United States;

(2) the institution has adequate facilities for classroom instruction, storage of arms and other equipment which may be furnished in support of the unit, and adequate drill areas at or in the immediate vicinity of the institution, as determined by the Secretary of the military department concerned;

(3) the institution provides a course of military instruction of not less than three academic years' duration, as prescribed by the Secretary of the military department concerned; and

(4) the institution agrees to limit membership in the unit to students who maintain acceptable standards of academic achievement and conduct, as prescribed by the Secretary of the military department concerned.

## CH. 102 JUNIOR R.O.T.C.

## 10 § 2031

(c) The Secretary of the military department concerned shall, to support the Junior Reserve Officers' Training Corps program—

(1) detail officers and noncommissioned officers of an armed force under his jurisdiction to institutions having units of the Corps as administrators and instructors;

(2) provide necessary text materials, equipment, and uniforms; and

(3) establish minimum acceptable standards for performance and achievement for qualified units.

(d) Instead of, or in addition to, detailing officers and noncommissioned officers on active duty under subsection (c)(1), the Secretary of the military department concerned may authorize qualified institutions to employ, as administrators and instructors in the program, retired officers and noncommissioned officers, and members of the Fleet Reserve and Fleet Marine Corps Reserve, whose qualifications are approved by the Secretary and the institution concerned and who request such employment, subject to the following:

(1) Retired members so employed are entitled to receive their retired or retainer pay and an additional amount of not more than the difference between their retired pay and the active duty pay and allowances which they would receive if ordered to active duty, and one-half of that additional amount shall be paid to the institution concerned by the Secretary of the military department concerned from funds appropriated for that purpose.

(2) Notwithstanding any other provision of law, such a retired member is not, while so employed, considered to be on active duty or inactive duty training for any purpose.

(Added Pub.L. 88-647, Title I, § 101(1), Oct. 13, 1964, 78 Stat. 1063, and amended Pub.L. 89-718, § 16, Nov. 2, 1966, 80 Stat. 1117; Pub.L. 90-83, § 3(4), Sept. 11, 1967, 81 Stat. 220; Pub.L. 93-165, Nov. 29, 1973, 87 Stat. 660; Pub.L. 94-361, Title VIII, § 807, July 14, 1976, 90 Stat. 933; Pub.L. 95-358, Sept. 8, 1978, 92 Stat. 592.)

## Historical Note

**References in Text.** The date of enactment of this section, referred to in subsec. (a), is the date of enactment of Pub.L. 88-647, which was approved Oct. 13, 1964.

**1978 Amendment.** Subsec. (b)(1). Pub.L. 95-358 added "or nationals" following "citizens".

**1976 Amendment.** Subsec. (a). Pub.L. 94-361 increased total number of units authorized to be established to 1,600 from 1,200 and limited the military institutes to establishment and maintenance of only one unit.

**1973 Amendment.** Subsec. (b)(1). Pub.L. 93-165 substituted "physically fit students" for "physically fit male students".

**1967 Amendment.** Subsecs. (c), (d). Pub.L. 90-83 substituted "officers and noncommissioned officers" for "noncommissioned

and commissioned officers" wherever appearing.

**1966 Amendment.** Subsec. (d). Pub.L. 89-718 capitalized the first letter of the first word in clauses (1) and (2).

**Short Title.** Section 1 of Pub.L. 88-647 provided: "That this Act [enacting this chapter and chapter 103 of this title, amending section 802 of former Title 5, Executive Departments and Government Officers and Employees, sections 1475, 1478, 1481, 3201, 4348, 5404, 5504, 5652b, 6023, 6387, 6959, 8201 and 9348 of this title, and sections 205, 209, 415, 416 and 422 of Title 37, Pay and Allowances of the Uniformed Services, repealing sections 3355, 3540, 4381 to 4387, 6901 to 6906, 6908, 6910, 8355, 8540, and 9381 to 9387 of this title, and enacting provisions set out as notes under this section and

## 10 § 2031

## GENERAL MILITARY LAW SUBT. A

section 2107 and former section 9385 of this title] may be cited as the 'Reserve Officers' Training Corps Vitalization Act of 1964'."

**Reduction in Number of Students Required to be in Junior Reserve Officers' Training Corps Unit; Reduced Requirements During Period Between September 1, 1980, and August 31, 1982.** Pub.L. 96-342, Title VI, § 602, Sept. 8, 1980, 94 Stat. 1087, as amended by Pub.L. 97-86, Title VII, § 702(a), Dec. 1, 1981, 95 Stat. 1111; Pub.L. 97-252, Title VII, § 702, Sept. 8, 1982, 96 Stat. 728, provided that:

"Notwithstanding the provisions of section 2031(b) of title 10, United States Code (subsec. (b) of this section), relating to the establishment and maintenance of units of the Junior Reserve Officers' Training Corps, during the period beginning on September 1, 1980, and ending on August 31, 1983, the Secretary of any military department may maintain a unit of the Junior Reserve Officers' Training Corps at any public or private secondary educational institution if—

"(1) the number of physically fit students in such unit who are at least 14 years of age and are citizens or nationals of the United States is not less than (A) 10 percent of the number of students enrolled in the institution who are at least 14 years of age, or (B) 100, whichever is less; and

"(2) the unit meets such other requirements (in addition to the requirements pre-

scribed by section 2031(b) of title 10, United States Code) (subsec. (b) of this section) as may be established by the Secretary of the military department concerned."

[Section 702(b) of Pub.L. 97-86 provided that: "The amendment made by subsection (a) [substituting "1982" for "1981" above] shall take effect as of August 31, 1981."]

**Savings Clause.** Section 402 of Pub.L. 88-647 provided that: "If a part of this Act [see Short Title note above] is invalid, all valid parts that are severable from the invalid part remain in effect. If a part of this Act is invalid in one or more of its applications, the part remains in effect in all valid applications that are severable from the invalid applications."

**Issuance of Regulations.** Section 102 of Pub.L. 88-647 provided that regulations implementing subsec. (a) of this section shall be issued by the President and by the Secretary of each military department not later than January 1, 1966.

**Legislative History.** For legislative history and purpose of Pub.L. 88-647, see 1964 U.S. Code Cong. and Adm. News, p. 3943. See also, Pub.L. 89-718, 1966 U.S. Code Cong. and Adm. News, p. 3701; Pub.L. 90-83, 1967 U.S. Code Cong. and Adm. News, p. 1538; Pub.L. 93-165, 1973 U.S. Code Cong. and Adm. News, p. 2716; Pub.L. 95-358, 1978 U.S. Code Cong. and Adm. News, p. 1363.

## Code of Federal Regulations

Junior Reserve Officers' Training Corps, policies for administering, see 32 CFR 542.1 et seq. Reserve Officers' Training Corps program for secondary educational institutions, see 32 CFR 111.1 et seq.

## Library References

Armed Services *et seq.* 15, 25.

C.J.S. Armed Services §§ 5, 28, 30 to 35.

## Notes of Decisions

Allowances for quarters 1  
Taxation 2

## 1. Allowances for quarters

Even assuming that the government represented to retired officers or noncommissioned officers who were serving or had served as junior Reserve Officers' Training Corps instructors at American high schools operated by the Department of Defense in Europe that they would receive living quarters allowances or free housing in addition to basic allowance for quarters, where such representations would have been contrary to statute, the gov-

ernment could not be estopped by statements or actions of its agents from terminating payment of basic allowances for quarters or living quarters allowances in compensation received by the Reserve Officers' Training Corps instructors who were occupying government housing. *Brant v. U.S.*, 1979, 597 F.2d 716, 220 Ct.Cl. 65.

## 2. Taxation

"Additional amount" paid by school district to retired Army officer employed as Junior Reserve Officers' Training Corps instructor, which was necessary to increase his retirement pay to amount he would have received if on active duty, was not excludable

APPENDIX C  
TITLE 10 UNITED STATES CODE

130  
CHAPTER I  
GENERAL

	<u>ARTICLE</u>
Authorization -----	101
Objectives of the NJROTC Program -----	102
Navy Support and Supervision -----	103

101. Authorization. The NJROTC is established under authority of Title 10, United States Code, Chapter 102. Excerpts from the statute relating to NJROTC may be found in Appendix 1.

102. Objectives of the NJROTC Program. The NJROTC Program is conducted to provide an opportunity for secondary school students to learn about the basic elements and requirements for national security and their personal obligations as Americans. The objectives of NJROTC are to:

- a. Promote patriotism.
- b. Develop informed and responsible citizens.
- c. Promote habits of orderliness and precision and to develop respect for constituted authority.
- d. Develop a high degree of personal honor, self-reliance, individual discipline, and leadership.
- e. Promote an understanding of the basic elements and requirements for national security.
- f. Develop respect for and an understanding of the need for constituted authority in a democratic society.
- g. Develop an interest in the Military Services as a possible career.

103. Navy Support and Supervision. The Navy will support the NJROTC program to the fullest possible extent to meet its stated objectives.

a. Instructor personnel are qualified retired officers and noncommissioned officers who have served on active duty for at least 20 years. Educational materials and equipment related to the teaching of the naval science courses at the host secondary school will be provided. Professors of Naval Science at the various college and university NROTC units are available to provide valuable assistance to the NJROTC unit.

b. Local responsibility for operation of the NJROTC unit will rest with the school authorities. The program elements will meet their criteria and standards. In essence, it is the local high school's or district's program as a cooperative venture between the school district and the United States Navy to provide naval science instruction which will relate to all fields of study in secondary education.

c. The Chief of Naval Education and Training is assigned overall responsibility for the program. In order to realize the stated objectives, CNET will:

(1) Provide the overall planning, direction, and policies affecting the NJROTC program.

(2) Attract and encourage outstanding public and private secondary schools to apply for NJROTC units.

(3) Make recommendations to the Chief of Naval Operations for submission to the Secretary of the Navy for establishment (or disestablishment) of NJROTC units.

(4) Provide necessary assistance in establishing NJROTC units and in planning for NJROTC activation ceremonies.

(5) Certify applicants as qualified for Naval Science Instructor (NSI) and Assistant Naval Science Instructor (ANSI) positions.

(6) Provide field trips to Recruit Training Centers, and orientation cruises and flights for NJROTC units when requested by NSIs, on condition that such can be accomplished without interfering with assigned missions or training schedules within available resources.

(7) Visit and inspect each unit annually.

(8) Prepare the annual budget for operation of the NJROTC program.

(9) Coordinate supply functions in support of the NJROTC program.

(10) Provide funding and other logistic support to the NJROTC Area Managers in the performance of their assigned tasks.

(11) Provide for further assignment of officers as NJROTC Area Managers and enlisted personnel as administrative assistants to Area Managers in support of the NJROTC program. These Area Managers will function as field representatives for CNET.

EXCERPTS FROM THE STATUTE RELATING TO THE NAVAL JUNIOR RESERVE OFFICERS  
TRAINING CORPS

"TITLE 10, UNITED STATES CODE

"Chapter 102. Junior Reserve Officers' Training Corps

"Section 2031. Junior Reserve Officers' Training Corps

"(a) The Secretary of each military department shall establish and maintain a Junior Reserve Officers Training Corps, organized into units, at public and private secondary educational institutions which apply for a unit and meet the standards and criteria prescribed pursuant to this section. Not more than 200 units may be established by all of the military departments each year beginning with the calendar year 1966, and the total number of units which may be established and maintained by all of the military departments under authority of this section, including those units already established on the date of enactment of this section, may not exceed 1,200. Public Law 94-361 enacted in July 1976 authorizes an increase in the total number of JROTC units from 1200 to 1600 starting with school year 1978-79. The President shall promulgate regulations prescribing the standards and criteria to be followed by the military departments in selecting the institution at which units are to be established and maintained and shall provide for the fair and equitable distribution of such units throughout the Nation.

"(b) No unit may be established or maintained at an institution unless:

"(1) the unit contains at least 100 physically fit students, or 10 percent of school enrollment, who are at least 14 years of age and are citizens or nationals of the United States;

"(2) the institution has adequate facilities for classroom instruction, storage of arms and other equipment which may be furnished in support of the unit, and adequate drill areas at or in the immediate vicinity of the institution, as determined by the Secretary of the military department concerned;

"(3) the institution provides a course of military instruction of not less than three academic years duration, as prescribed by the Secretary of the military department concerned; and

"(4) the institution agrees to limit membership in the unit to students who maintain acceptable standards of academic achievement and conduct, as prescribed by the Secretary of the military department concerned.

"(c) The Secretary of the military department concerned shall, to support the Junior Reserve Officers Training Corps program:

"(1) detail officers and noncommissioned officers of an armed force under his jurisdiction to institutions having units of the Corps as administrators and instructors;

"(2) provide necessary text materials, equipment, and uniforms; and

"(3) establish minimum acceptable standards for performance and achievement for qualified units.

"(d) Instead of, or in addition to, detailing officers and noncommissioned officers on active duty under subsection (c)(1), the Secretary of the military department concerned may authorize qualified institutions to employ, as administrators and instructors in the program, retired officers and noncommissioned officers, and members of the Fleet Reserve, and Fleet Marine Corps Reserve, whose qualifications are approved by the Secretary and the institution concerned and who request such employment, subject to the following:

"(1) Retired members so employed are entitled to receive their retired or retainer pay and an additional amount of not more than\* the difference between their retired pay and the active duty pay and allowances which they would receive if ordered to active duty, and one-half of that additional amount shall be paid to the institution concerned by the Secretary of the military department concerned from funds appropriated for that purpose.

"(2) Notwithstanding any other provision of law, such a retired member is not, while so employed, considered to be on active duty or inactive duty training for any purpose."

\*Interpreted by Comptroller General of the United States as "equal to the difference."

APPENDIX D  
CORRESPONDENCE

DEPARTMENT OF THE NAVY  
Youth Programs Area Manager, Norfolk  
Building X-19 Naval Station  
Norfolk, Virginia 23511

10 June 1990

From: YPFR Norfolk, Virginia  
To: Defense Manpower Liaison Officer, Attn: Navy Liaison  
Officer, 550 Camino El Estero, Monterey, CA 93940

Subj: REQUEST FOR ACCESSIONS STATISTICS

Encl: (1) NJROTC Accession Statistics Report (Proposed Format)

1. There is a need in the management process of the Naval Junior Reserve Officers Training Corps (NJROTC) Program to document the benefits to the Navy and other services of the NJROTC Program. One of the measurable benefits is accession of NJROTC cadets. The current method of collecting statistics in this area relies on a "snapshot" report at the end of each school year. This report is compiled by the Naval Science Instructors in each of 241 units who canvas the graduating cadets to determine their commitments and plans regarding military service. Unfortunately, a sizable portion of the information developed is not reliable because many responses are based on the stated intentions of cadets at the time of graduation rather than obligations.
2. This letter requests the assistance of your organization in obtaining a more accurate picture of NJROTC cadet accession. Statistics displayed in the format of enclosure (1) provided once a year on 1 January for the preceding year should meet our need.
3. Thank you for your consideration.



29 April 1990

MEMORANDUM

From: YPFR Norfolk  
 To: Naval Science Instructors, Area FIVE

Subj: NJROTC INFLUENCE ON NAVAL ACCESSIONS (SY 89-90)

1. In an attempt to gather more accurate data on the effect of the NJROTC program on Navy recruiting, it is requested that this questionnaire be filled out and returned to this office. These responses will aid in quantifying the information supplied by graduating cadets about their intentions to join the military.

For SY 89-90

Unit Name \_\_\_\_\_

2.	<u>DECLARED</u>	<u>ACTUAL</u>
SENIORS JOINING MILITARY	_____	_____
TOTAL SENIORS	_____	_____
NAVY ENLISTED	_____	_____
MARINES ENLISTED	_____	_____
AIR FORCE ENLISTED	_____	_____
ARMY ENLISTED	_____	_____
RESERVES/NATL. GUARD	_____	_____
NAVAL ACADEMY	_____	_____
OTHER ACADEMIES	_____	_____
OTHER ROTC	_____	_____

3. Thank you for your prompt assistance.

  
 L. A. Curtin

ALL HANDS MAGAZINE  
Navy Internal Relations Activity  
Room 1046  
1300 Wilson Blvd.  
Arlington, VA. 22209-2307

Attn: Research Department

Dear Personnel

I am interested in obtaining all information that you have available on the NJROTC Program and its influence on Navy accessions. Also pros, cons, success rate, benefits, evaluations etc., and all reports and research that has been done on this subject.

Your earliest reply will be greatly appreciated.

If there is any cost, please bill me.

Yours truly,

A handwritten signature in cursive script, appearing to read "Rosa Cuyler".



**THE  
RETIRED  
OFFICERS  
ASSOCIATION**

201 N. Washington St. Alexandria VA 22314-2529 • (703) 549-2311

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*The Retired Officer Magazine*

January 11, 1989

Dear Ms. CURTIN

Thank you for your recent letter. We are pleased to forward it to Capt David Scott, USN-Ret. so that he will know of your desire to contact him.

We follow this route so as not to compromise our authors' addresses without their permission. Our experience tells us that most people approached in this manner usually do respond.

Sincerely,

NOPA J. TWIGGLE  
Managing Editor

NJT/elw

cc: Capt David Scott, USN-Ret.

139

DEPARTMENT OF THE NAVY  
NAVY INTERNAL RELATIONS ACTIVITY  
ARLINGTON, VA 22209 2307

IN REPLY REFER TO  
5780  
Ser 22/052  
31 Jan 89

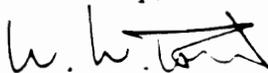
Thank you for your letter of 6 January. Unfortunately, we are not the best office to give you information on the NJROTC program.

I've forwarded your letter on to the Navy Recruiting Command here in Washington. They should be able to get you the information you need.

Please find enclosed a copy of the June 1987 issue of All Hands. You will find an article on pages 14 and 15 concerning the NJROTC program.

Again, thank you for your interest in All Hands. I hope that you get the information you're looking for.

Sincerely,



W. W. REID  
Editor, All Hands magazine  
By direction of  
the Commanding Officer

Encl:

(1) June 1987 issue of All Hands.

Dear Lisa

16 January 1989

TROA forwarded your letter to me and I will try to give you a little information. First of all, my article was an attempt to be humorous hence the phrase "scholarly and incisive". I was trying to make the reader realize what he wasn't going to hear!

For that sort of information, I am sure that the Training Command must have some sort of tabular data on results, percentages, goal achievement, etc. But let me give you just one person's feelings about the program:

I taught down south in a school that was about equal black and white. As the program progressed, more and more blacks entered into it. This led to a decline in the white enrollment; they simply didn't want to be associated with them.

As this situation progressed, I found that the level of understanding was decreasing and I was forced to teach more basic skills and principles. When you write about 15 numbers on the blackboard and announce that "we're going to divide that number by ten" and are greeted by a terrible groan and the wail, "Lordy Captain, we'll be here all afternoon", you know that the scheduled lesson of Celestial Navigation is going to have to be delayed for quite some time!

At the end of my career there I was teaching remedial math, English and very basic history and science. We concentrated on teaching social behavior using terms such as "please, thank you, may I help you, excuse me, what can I do for you, sir, mam, pardon me" I know that sounds terrible but it made a big difference and the other teachers noted the change in those NJROTC students who were in their classes.

Through the wearing of the uniform, we taught cleanliness habits, how to take care of one's clothing, the importance of shined shoes and the pride that comes from a better appearance.

Through our Drill Teams, male and female, our Color Guard and the utilization of "side boys" for special events we made a big impression in the community with the Navy "presence" That, I believe, is important!

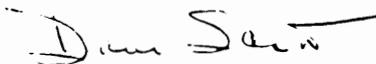
I was able to convince about 15-20 students to go on to college. Now this is out of about 500 students (and I'm sort of pulling that number out of my hat) and so it seems like a miserable percentage but it represented a mile-stone in their lives. Once again, just giving you a ballpark figure, I would say that we would get about three enlistments out of each class of 25-30 students.

In my own mind I imagine that the Navy does not feel that they are getting the totals from the program that they thought they would or wish they could. However, I'm sure there are a lot of intangibles that I've tried to point out that are important and should not be overlooked simply because you are unable to tabulate them.

From my past experience I feel that in locales like mine you have to tailor the program to what you have to work with. Much of the curriculum is far too advanced for the run of the mill high school student you find today in southern integrated schools. I was proud of my service and tried to show that pride in my teaching of both the good and the bad sides of military life.

I'm afraid I haven't given you very much assistance but I wish you well as you head for that dissertation. I would be most willing to answer any specific questions you might have or perhaps add something in any specific area.

Best wishes,

  
Dave Scott

16 Franklin Street Rd  
SAVANNAH, GA. 31411

## VITA

Lisa Ane Curtin was born in Oakland, California. She attended nine different schools in four countries during grades K-12 as her father was a career member of the United States Air Force. As an undergraduate she attended Old Dominion University, Norfolk, Virginia, from 1971-1975 receiving a Bachelor of Science degree in Special Education. She taught public school from 1975-1979 in both Florida and Virginia while also working as a research associate with Old Dominion University in 1978 and 1979.

In 1979 Ms. Curtin received her commission in the United States Navy. She then, during off duty hours, completed a Masters of Science in Counseling and Human Development from Troy State University, Troy, Alabama, in 1985. In 1986 she was selected for the Navy Post Graduate program and completed, on full scholarship, a Certificate of Advanced Study Program in Educational Administration from Old Dominion University in 1987. Her doctoral work was done at Virginia Polytechnic Institute and State University in Educational Administration. LCDR Curtin is currently an adjunct professor with Troy State University, Norfolk Campus, instructing in the Masters of Science, Educational Leadership program. In the Navy, she is stationed in Norfolk, Virginia, as the Executive Officer of the U.S. Navy's largest Transient Personnel Unit.

*Lisa Ane Curtin*