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THESIS

JUNIOR RESERVE OFFICERS' TRAINING CORPS: A COMPARISON WITH OTHER SUCCESSFUL YOUTH DEVELOPMENT PROGRAMS AND AN ANALYSIS OF MILITARY RECRUITS WHO PARTICIPATE IN JROTC

by

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June 2003

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13. ABSTRACT ***(maximum 200 words)***

This study seeks to identify successful youth development programs and the reasons for their success; to describe the Junior Reserve Officers' Training Corps (JROTC) and its achievements; to compare JROTC with successful youth development programs; and to explore the impact of JROTC on military recruiting. The descriptive analysis and comparison of programs are based on an extensive review of previous research. The effects of JROTC on recruiting were examined through longitudinal data files, covering military enlistments from 1990 through 2001, obtained from the Defense Manpower Data Center. The results show that JROTC is similar to a number of other programs in successfully promoting youth development. Nevertheless, no single program can match JROTC in its size, level of funding, and scope of accomplishments. Further, information on enlistments suggests that JROTC assists military recruiting in several ways: 85,000 graduates of JROTC joined the military in the period studied; the first-term attrition rates of JROTC graduates were consistently lower than those of all recruits; and the positive effects of JROTC were most noticeable among certain demographic groups. Further research is recommended to study added dimensions of youth development, various other effects of JROTC on recruiting, and the economic implications of the program.

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ABSTRACT

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I. INTRODUCTION

A. OVERVIEW

Congress established the Junior Reserve Officers' Training Corps (JROTC) Program in 1916 with the broad mandate of developing good citizenship and responsibility in young people. The Department of Defense (DoD) then took this mandate and established appropriate missions and objectives for each of the four services. One of the benchmarks for evaluating JROTC today is its effectiveness in helping to develop the nation's youth. Specifically, JROTC is a high school program of instruction designed to instill the values of citizenship, service to the United States, personal responsibility, and a sense of accomplishment in the students in American secondary educational institutions. Self-esteem, teamwork, and self-discipline are the cornerstones of JROTC programs.

JROTC is the oldest and largest public enterprise for youth development. Over time, JROTC has had its ups and downs, varying with popular opinion toward the military in the United States and its communities and with the allocation of scarce defense budget resources by Congress. But today, JROTC thrives as an institution that promotes good citizenship and responsibility by teaching values and by training youth to organize and achieve worthwhile objectives together.

B. BACKGROUND

Currently, JROTC has over 450,000 students enrolled in 2,900 high schools across the country, with more than 750 additional secondary schools on waiting lists to establish a program. JROTC is growing rapidly, and DoD recently approved funding that could raise the total number of units to 3,500 or more over the next five years. Although the program costs DoD about $500 per student, Pentagon officials say it is a modest investment in the future of today's youth.[1] The overall cost to DoD for JROTC was $211 million in fiscal year 2000, and the budget for fiscal 2001 was $215 million.[2]

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[1] Linda D. Kozaryn, Help Wanted: DoD Seeks JROTC Instructors, American Forces Information Service News Article, April 26, 2001.

[2] Ibid.

The military services are increasing the total number of JROTC units. The Army is adding 50 units per year to reach a total of 1,645 units by the year 2005. The Marine Corps is adding 10 units per year to reach 260. The Air Force has slated funding for about 50 more units per year to reach a total of 945. The Navy objective is to reach 700 units. If the Services execute their expansion plans fully, with these additions, the total number of schools with JROTC programs would be 3,550.

The value and direction of JROTC has been debated for decades. In a letter to Congress, Defense Secretary Donald H. Rumsfeld writes: "The Junior ROTC program has 'well-served' the military and the nation." In a letter to Senator Strom Thurmond of South Carolina, Rumsfeld further states: "JROTC…connects the military with local communities while making positive and lasting impressions on today's youth. The program influences youth to stay in high school and graduate--something the military has long valued."[3] Although JROTC is valuable and effective in promoting youth development (including promoting high school graduation and academic achievement), questions are raised whether other youth development programs are as good, or better, than JROTC in promoting youth development.

C. PURPOSE AND SCOPE

The purpose of this research is to determine the characteristics held by successful youth development programs. Further, JROTC is compared with other successful national youth development programs to determine the relative value of JROTC in helping to develop the nation's youth. The scope of the thesis includes an overview of the following: (1) youth development programs throughout the nation,; (2) JROTC as a youth development program; and 3) the impact of JROTC on military recruiting.

D. RESEARCH QUESTIONS

This study focuses on answering several questions: 1) What are the characteristics of successful youth development programs?, 2) How does JROTC compare with other successful national youth development programs?, 3) How effective is JROTC as a recruiting program?, and Of JROTC graduates who join the military, how does their performance compare with that of other recruits?

[3] Ibid.

E. ORGANIZATION OF THE STUDY

Chapter II presents an overview of the following: youth demographics and statistics, developmental needs of adolescents, the goals and types of youth development programs, studies of youth development programs, funding for youth development programs, and public support for youth development programs. Chapter III discusses JROTC today: locations of units and the demographic characteristics of cadets, the distribution of units across the four military services, JROTC career academies, funding, and previous studies. A comparison of JROTC with other successful youth development programs is also presented in Chapter III. Chapter IV discusses JROTC graduates and military recruiting by taking a look at DoD data on recruits who entered active duty from 1990 through 2001. A final chapter offers a summary, conclusions, and recommendations for further research.

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II. LITERATURE REVIEW

A. YOUTH DEMOGRAPHICS AND STATISTICS

In 1999, there were 70,199,400 children in the United States under the age of 18. As a whole, in 1999, there were 47.4 million children between the ages of 6 and 17 years in the United States.[4] As of 2000, there were 22.7 million children under the age of six, 24.1 million children between the ages of 6-11, and 23.5 million children between the ages of 12 and 17 for a total of 70.3 million children under the age of 18 living in the United States constituting 26 percent of the total population.[5] Hispanics have increased more rapidly than other racial or ethnic group in the U.S., growing from 9 percent of the child population in 1980 to 16 percent in 2000.

As of 2002, statistics show that the following occurs on a daily basis in the U.S.: 5 children (under 20 years old) commit suicide; 9 children (under 20 years old) are victims of a homicide; 9 children (under 20 years old) die from firearms; 34 children (under 20 years old) die from accidents; 2,861 teenagers drop out of high school; 4,248 children are arrested; 7, 883 children are reported abused or neglected; and 17, 297 public school students are suspended.[6] These numbers vary greatly among race and ethnic groups. As of 1998, nationally, 1 in 6 children in the United States is poor; 16.6 percent under 18 are poor; 71.9 percent of 4th graders are reading below what is considered a proficient level; while 133,609 children and teens are in juvenile or adult correctional facilities, the vast majority of children involved in the juvenile justice system are nonviolent.[7]

Most juvenile crime involves property offenses such as arson, burglary, car theft, and larceny. Less than 10 percent of young people who come in contact with the juvenile justice system are serious, habitual, violent offenders.[8] More than 112,000 young people

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4 National Youth Development Information Center, Youth Related Statistics, [http://www.nydic.org/nydic/statistics.html], November 2001.

5 National Youth Development Information Center, Youth Related Statistics, [http://www.nydic.org/nydic/stat_links.htm], November 2002.

6 [http://www.childrensdefense.org/everyday.htm], March 2002.

7 Ibid.

8 Howard N. Snyder and Melissa Sickmund, Juvenile Offenders and Victims: 1999 National Report, U.S. Department of Justice, Office of Justice and Delinquency Prevention, September 1999.

are in juvenile institutions nationwide. Overall, 78 percent of incarcerated juveniles are boys and 22 percent are girls.[9] Minority youths are overrepresented at every stage of the process--including arrest, detention, prosecution, adjudication, and transfer to adult court.[10]

In 2000, persons of color accounted for approximately 32 percent of the U.S. juvenile population, but 58 percent of those in juvenile facilities. Of the 78 percent of boys in juvenile facilities across the country, nearly 60 percent are minority youth. More than half of all girls in juvenile facilities are minorities.[11] Nationally, black youth under age 18 represent 15 percent of the juvenile population, but make up 26 percent of juvenile arrests, 31 percent of referrals to juvenile court, 44 percent of the detained population, 34 percent of youth formally processed by the juvenile court, 46 percent of youth sent to adult court, 32 percent of youth adjudicated delinquent, 40 percent of youth in residential placement, and 58 percent of youth incarcerated in state adult prisons.[12]

B. DEVELOPMENTAL NEEDS OF ADOLESCENTS

Young people have basic needs critical to survival and healthy development. Some of these needs include the following: a sense of safety and structure, belonging and membership, self-worth and an ability to contribute, independence and control over one's life, closeness and several good relationships, and competence and mastery.[13] Table 2.1 describes the seven developmental needs of young adolescents and their corresponding characteristics.

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9 U.S. Department of Commerce, Bureau of the Census, 2000 Census of Population and Housing, Summary File 1. Calculations by Children's Defense Fund.

10 Children Defense Fund, [http://www.childrendefense.org/ss_ydfs_viocrime.php], March 2002.

11 Ibid.

12 Ellen Poe-Yamagata and Michael A. Jones, And Justice for Some: Differential Treatment of Minority Youth in the Justice System, Building Blocks for Youth, April 2000.

13 A New Vision: Promoting Youth Development, Testimony of Karen Johnson Pittman, Director, Center for Youth Development and Policy research, before the House Select Committee on Children, Youth and Families, September 30, 1991.

Table 2.1. Seven Developmental Needs of Young Adolescents (and Their Characteristics).

NEED	CHARACTERISTICS
PHYSICAL ACTIVITY	Changing hormone levels produce periods of boundless energy and lethargy; desire to test new physical capabilities; normal variation in onset of puberty, rate of growth; vulnerability to injury due to rapid growth
COMPETENCE AND ACHIEVEMENT	Desire for personal recognition; desire for responsibility; desire to succeed; emergence of new interests, capabilities; emerging racial/cultural identity; emerging sexual identity; "imaginary audience" self-consciousness; need for approval from adults; need for approval from peers; somewhat shaky self-esteem; vulnerability to adult expectations
SELF-DEFINITION	Emerging gender identity; emerging racial/cultural identity; emerging sense of a personal future; emotionalism, mood swings; new body image; new reactions from others; onset of formal operations
CREATIVE EXPRESSION	Desire to test new physical and mental capabilities; emerging racial/cultural identity; emerging sexual identity; onset of formal operations
POSITIVE SOCIAL INTERACTIONS WITH PEERS AND ADULTS	Continued importance of parents and other adults; "imaginary audience," self-consciousness; increasing importance of peers; maturing social skills; need for approval from adults; need for approval from peers; search for models, heroes, and heroines
STRUCTURE AND CLEAR LIMITS	Authoritarianism; desire for autonomy; desire to know and understand rules and limits; increasing importance of peers; lack of life experience; need for continued adult guidance; need for security; onset of formal operations; "personal fable," immunity to harm
MEANINGFUL PARTICIPATION	Desire for autonomy; desire to be part of the "real" adult world; desire for personal recognition; desire for responsibility; emerging gender identity; emerging racial/cultural identity; lack of life experience; maturing social skills; onset of formal operations; readiness to make commitments to ideals, activities, and people

From: National Youth Development Information Center (NYDIC), [http://www.nydic.org/nydic/about.html], November 2002.

Based on research, youth developmental needs include the need for basic food and shelter, supportive, caring relationships, safe places, and opportunities for growth.[14] Specific needs are influenced by current development (physical, cognitive and social), as well as by individual characteristics and a broad set of background and contextual factors.[15] Table 2.2 lists critical tasks that adolescents ages 10-15 years old must accomplish to become productive and responsible adults.

Table 2.2. Youth Development Critical Tasks, Competencies or Assets.

CRITICAL TASK	RESULT
Cognitive development	Expand knowledge; Develop critical thinking and reasoning skills; and Experience competence through academic achievement.
Social development	Increase communication and negotiation skills; Increase capacity for meaningful relationships with peers and adults; and Explore adult rights and responsibilities.
Physical development	Begin to mature physically and to understand changes that come with puberty; Increase movement skills through physical risks; Develop habits that promote lifelong physical fitness; and Learn to take and manage appropriate physical risks.
Emotional development	Develop a sense of personal identity; Develop a sense of personal autonomy and control; and Develop coping, decision-making, and stress-management skills.
Moral development	Develop personal values; Develop a sense of accountability in relation to the larger society; and Apply values and beliefs in meaningful ways.

From: National Youth Development Information Center (NYDIC), [http://www.nydic.org/nydic/about.html], November 2002.

Developmental needs are met within a social context and are influenced by the demands and supports provided by those contexts, such as the family, school, and community.[16]

14 Youth Development Programs and Outcomes: Final Report for the YMCA of the USA, Search Institute, 1996.

15 Ibid.

16 Ibid.

While many youth programs recognize the need to view the country's young people as resources and leaders of tomorrow, these programs also acknowledge that all young people need certain resources to reach their potential. Moreover, while young people under 18 years of age represent only 25 percent of the population, they are 100 percent of America's future.[17] Yet, over the past two decades, research and data have shown that social and demographic changes have had a significant effect on youth and their families, creating a need for programs to support and strengthen families and help them meet their children's needs.[18]

Youth development is defined as a process that prepares young people to meet the challenges of adolescence and adulthood through a coordinated, progressive series of activities and experiences that help them to become socially, morally, emotionally, physically, and cognitively competent.[19] Positive youth development addresses the broader developmental needs of youth, in contrast to deficit-based models that focus solely on youth problems. This section focuses on positive youth development.

Some of the key elements of youth development include: focusing on the positive; taking personal responsibility for making a difference; being "proactive"; viewing youth as resources; and hoping that change is possible.[20] Youth development is age-specific and assumes that there are certain growth-related tasks that adolescents must complete to develop into mature adults.[21] And, youth development is multidimensional, embracing a process of human growth and development, a philosophical orientation to social development and community, and a programmatic framework for youth services.[22] Lastly, youth development means purposefully seeking to meet youth needs and build

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17 National Youth Development Information Center, [http://www.nydic.org/evaluation.html], November 2002.

18 Ibid.

19 Approved by the Executives of National Collaboration for Youth Members, March 1998.

20 National Youth Development Information Center, [http://www.nydic.org/evaluation.html], November 2002.

21 Raley, Hahn, Youth Development: On the Path Toward Professionalism, National Assembly, 1999.

22 Ibid.

youth competencies relevant to enabling them to become successful adults.[23] This positive development approach views youth as resources and builds on their strengths and capabilities to develop within their own community, rather than seeing them as problems.[24]

C. GOALS OF YOUTH DEVELOPMENT PROGRAMS

Currently, some of the goals of youth development programs are stated as follows: improving youth's academic performance, providing an opportunity for youth to use their out-of-school time safely and productively, providing an opportunity for youth to develop positive relations with peers and adults, having parents become more involved in their children's lives and schooling, keeping youth off the streets and out of trouble, and providing youth with athletic and cultural experiences to enrich their lives.[25]

Youth development programs are designed to meet the developmental needs of youth and to build a set of core assets and competencies needed to participate successfully in adolescent and adult life.[26] They also assist in developing competencies that will enable them to grow, develop their skills and become healthy, responsible and caring youth and adults.[27] Youth development programs attempt to help youth develop competencies through the following programs: conducting activities with a primarily nonacademic focus, employing primarily active and experimental learning methods; and promoting the competencies through group and one-to-one activities, which may include values, education, leadership development, community service or volunteerism, after school programs, tutoring, and academic enrichment.[28]

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[23] Building Resiliency, pp. 11-14, National Assembly, 1994; and Position Statement on Accountability and Evaluation in Youth Development Organizations, p. 1, National Collaboration for Youth, 1996.

[24] Ibid.

[25] Jean Baldwin Grossman et al., Multiple Choices After School: Findings from the Extended-Service School's Initiative, [http://www.ppv.org/], June 2002.

[26] National Youth Development Information Center, [http://www.nydic.org/nydic/devdef.html], November 2002.

[27] Ibid.

[28] Ibid.

These programs seek to develop young people's character, confidence, competence, citizenship, and connectedness.[29] These programs do not require money or status.[30] They do not require a child to wear a negative label, such as "at-risk," "troubled," "handicapped," "delinquent," or "poor" before receiving service. They do not even require good character. What these programs do is help guide those who may be in danger of acquiring, or already have, unacceptable habits and attitudes, as well as those who already have outstanding character and behavior.[31]

Effective youth programs are: 1) youth-centered (staff and activities engage young people's diverse talents, skills, and interest, building on their strengths and involving them in planning and decision-making), 2) knowledge-centered (building a range of life skills, activities show youth that "learning" is a reason to be involved, whether in sports, clubs, arts, or community service, and provide opportunities to connect with a wide array of adult and peer mentors), and 3) care-centered (providing family-like environments where youth can feel safe and build trusting relationships). Youth development programs can provide a set of developmentally rich contexts where development can take place safely, and opportunities for growth in multiple areas can be stimulated.

D. TYPES OF YOUTH DEVELOPMENT PROGRAMS

According to the National Center for Charitable Statistics, about 17,000 youth development organizations were active in the United States in 1990.[32] Some programs are affiliated with national youth-serving organizations; other programs are sponsored by public institutions or agencies, including parks and recreation departments, libraries, schools, and the police. Some programs are operated by private organizations with broad mandates, such as religious groups, museums, and civic organizations, while others are run by freestanding grass-roots, community-based organizations.[33] Because out-of-

[29] National Youth Development Information Center (NYDIC), January 2003, [http://www.nydic.org/nydic/positive.html].

[30] Ibid.

[31] Ibid.

[32] The National Center for Charitable Statistics, now a division of the Urban Institute, developed a National Taxonomy of Exempt Entities to categorize tax-exempt organizations. One category within this taxonomy is called "youth development," and in 1990 this category encompassed 17,000 organizations.

[33] Ibid.

school activities are voluntary, young people willingly participate in programs they find attractive and responsive to their needs, or as Quinn describes it, they "vote with their feet."[34]

Youth development organizations vary in structure. Some offer a facility where youths can gather; others link youths to a mentor or group that can meet anywhere. Some programs focus on a single activity--for example, sports or the arts--while others offer a broad array of choices to youth participants.[35] Youth development programs distinguish themselves from the vast array of ameliorative services by emphasizing support for the normal socialization and healthy development of young people. If the entire spectrum of youth services can be thought of as a continuum, youth development services would be at one end and social control or incarceration would be at the other. In between these ends of the continuum would fall primary prevention (of problems such as substance abuse, adolescent pregnancy, juvenile crime, and the like), short-term intervention, and long-term treatment.[36]

Quinn's study, "Where Need Meets Opportunity: Youth Development Programs for Early Teens," describes the array of various organizations that offer programs and services for youths in their early teens. According to Quinn, youth program providers can be categorized and analyzed in five different ways. The first type is national youth-serving organizations, which represent the largest single category of youth development programs for early teens. These long-standing programs are familiar throughout the nation, and include 4-H, Boy Scouts, Girl Scouts, Boys and Girls Clubs, YMCA, YWCA, Girls Incorporated, Camp Fire, Big Brothers/Big Sisters, and Junior Achievement.[37]

Programs offered by national youth-serving organizations share a number of common features. For instance, most hold a commitment to promoting social values and building a variety of life skills (such as leadership, problem-solving, and decision-making), most rely on small groups and trained leaders to deliver their program, and most

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[34] Jane Quinn, Where Need Meets Opportunity: Youth Development Programs for Early Teens, The Future of Children, Los Altos, Fall 1999.

[35] Ibid.

[36] Ibid.

[37] Ibid.

adopt a pedagogy that involves hands-on education, cooperative learning, and age-appropriate programming strategies.[38] Key differences also separate the programs. For instance, some organizations (YMCA, YWCA, Boys and Girls Clubs, Girls Incorporated) run programs in their own facilities, while others (Scouts, Camp Fire, 4-H) operate through troops or groups that can meet in schools, churches or synagogues, community centers or even in private homes.[39] The structure of the Big Brothers/Big Sisters and other mentoring programs provide a professionally supervised one-to-one relationship between the child and the adult volunteer. The troop and mentoring programs rely primarily on volunteers who work directly with young people and tend to meet once a week for one or two hours. In contrast, the facility-based programs more often use paid staff, supplemented by volunteers, to deliver the majority of their services and they usually offer programming for 20 to 40 hours per week.[40]

Some organizations offer a comprehensive array of youth development programs designed to address the needs of the "whole child" (e.g., the traditional Junior Achievement program teaches entrepreneurship skills), while others emphasize specific kinds of knowledge and skills (e.g., the core program of Girls Incorporated encompasses careers and life planning, health and sexuality, leadership and community action, sports and adventure, self-reliance and life skills, and culture and heritage).[41] Differences among these organizations also include the demographic profile of youth participants, in terms of socioeconomic status, and racial and ethnic background. For example, Boys and Girls Clubs and Girls Incorporated serve high percentages of low-income and minority youths, while the scouting organizations tend to under-serve these groups.[42] Surprisingly, some organizations have not determined the demographics of their current service populations-at least not on the national level.

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[38] Ibid.

[39] Ibid.

[40] Public Library Association, Service to Children Committee, Latchkey, Children in the Public Library: A Position Paper, Chicago: American Library Association, 1988.

[41] Supra note 12.

[42] A 1992 analysis of the annual reports of these organizations revealed that the service population of Boys and Girls Clubs and Girls Incorporated centers was about 51% minority and two-- thirds low income. The Boy Scouts reported that about 18% of its membership was minority, and the Girls Scouts reported minority membership at 14.1%.

Second, a number of programs are sponsored by public agencies. Although the major national youth organizations (with the exception of 4-H) are private, nonprofit organizations, many receive public support through federal, state, and local funding streams. Nonetheless, it is useful to consider public-sector sponsorship as distinct from private sponsorship and separate from the public funding provided to privately-organized programs. Two public sector institutions stand out as offering substantial youth development programming for young adolescents: public libraries and parks or recreation systems.[43] As society considers how to expand the reach of programs that support normal, healthy youth development, the ubiquity of these services makes them especially important. Nearly every neighborhood, or at least community, has a public library and a park or recreation center. And the broad public mandate to provide these services (including facilities, trained staff, equipment, and programs) ensures their stability, at least relative to privately-supported services.

Third, according to Quinn, another category is youth sports organizations. Sports organizations and sports programs are popular with young people, whether they are affiliated with national organizations, such as the American Youth Soccer Organization or Little League baseball, or run in a more informal way by local parks departments or community organizations. The popularity of sports among American youths suggests that such programs have untapped potential to promote positive youth development and to engage even greater numbers of young adolescents.

A fourth category is broad-based private organizations. America offers a dazzling array of organizations, associations, clubs, and social communities, many of which provide programs and services for young people. Included in this category are religious organizations, adult service clubs, such as Rotary or Kiwanis, intergenerational programs offered by various sponsors, and private or quasi-private community institutions, including museums.

[43] Other public-sector systems provide services for children and youths that do not fall primarily into the youth development arena: the child welfare system, which arranges foster care, adoption, and child protection services; and the juvenile justice system.

According to the results of surveys, religious youth programs attract the participation of one-third to one-half of American youths.[44] Religious youth leaders report noticeably higher participation among 10- to 15-year-olds than among older teens, estimating that 50 percent to 75 percent of youth members are under the age of 15. Age-related rites of passage, such as Confirmation and Bar/Bat Mitzvahs, play an important role in maintaining young adolescents' interest in religious participation. Patterns of participation also differ across religious denominations, which may reflect the variation in financial support and leadership emphasis given to work with youths.[45] Regardless of denominational differences, however, religious youth organizations generally seek to foster moral development and promote young people's social and emotional growth.

America's vast network of adult service clubs, including the Association of Junior Leagues, Kiwanis, Rotary, and adult fraternities and sororities, also support programs for young people. Some sponsor “junior” chapters of the adult groups. For example, programs sponsored by adult service clubs include the Interact Clubs of Rotary International, the Squires program of the Knights of Columbus, the Key and Builders Clubs of Kiwanis International.[46]

Lastly, according to Quinn, are the independent youth organizations. Grass-roots youth organizations play an important role in many American communities, although they have seldom been counted or studied explicitly. As a group, however, grass roots youth organizations offer a wide array of services that may include life-skills training, substance abuse education, counseling, crisis intervention, community service, academic tutoring, communications skills, peer counseling, sex education, job readiness and career awareness, health education, physical fitness and sports, arts programs, and safe havens. While these youth groups are often hard to describe and highly idiosyncratic, they are

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[44] Jane Quinn, Where Need Meets Opportunity: Youth Development Programs for Early Teens, The Future of Children, Los Altos, Fall 1999.

[45] Dean, K-C. and Yost, P. R., A Synthesis of the Research on, and a Descriptive Overview of Protestant, Catholic, and Jewish Religious Youth Programs in the United States. Paper Commissioned by the Carnegie Task Force on Youth Development and Community Programs. Washington, DC: Carnegie Council on Adolescent Development, 1991.

[46] Fitzgerald, A. K. and Collins, A. M., Adult Service Clubs and their Programs for Youth. Paper Commissioned by the Carnegie Task Force on Youth Development and Community Programs. Washington, DC: Carnegie Council on Adolescent Development, 191,41.

potentially powerful resources that can contribute to the healthy development of young people, especially those living in a high-risk environment.[47]

E. STUDIES OF YOUTH DEVELOPMENT PROGRAMS

1. Participation Patterns

Public/Private Ventures, a youth development think tank, examined participation patterns and program delivery in fifteen local organizations that were affiliated with national youth programs (Boys and Girls Clubs, Girls Incorporated, and the YMCA). In each case, five local programs were chosen for analysis because they were well-implemented and applied a youth development philosophy to their work. Overall, although the assessment did not examine youth outcomes directly, the researchers concluded that these facility-based programs offered activities that were attractive to young people, fostered their healthy development, and elicited participation in a level significant enough to make a positive difference in the lives of many youths.[48]

Furthermore, participation in youth development programs (religious youth programs, sports programs, Scouts, YMCA, YWCA, 4-H, Camp Fire, and others) tends to drop off during early adolescence. The explanation for this phenomenon is probably multifaceted: existing programs may not meet the developmental needs or interests of young teens; adolescents have more choice than younger children about how to spend their free time; and adult leaders may be more comfortable with younger children, and so develop programs more suited to their interests.[49]

Several other factors, including income, gender, and race, influence who joins youth development programs. The U. S. Department of Education survey of eighth graders, discussed above, revealed that boys and girls were equally likely to participate in organized out-of-school activities (71 percent and 72 percent respectively, participated in

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[47] McLaughlin, M. W., Irby, M. and Langman, J., Urban Sanctuaries: Neighborhood Organizations in the Lives and Futures of Inner-city Youth. San Francisco: Jossey-Bass, 1994; Heath, S. B. and Soep, E., The Work of Learning at Youth-Based Organizations: A Case for the Arts. Educational Researcher (December 1997) 26,9.

[48] Gambone, M. A. and Arbreton, A. J., A Safehaven: The Anatomy of Youth Organization to Healthy Adolescent Development, Philadelphia: Public/Private Ventures, April 1997.

[49] McLaughlin, M. W., Irby, M. and Langman, J., Urban Sanctuaries: Neighborhood Organizations in the Lives and Futures of Inner-64, Youth, San Francisco: Jossey-Bass, 1994; Heath, S. B. and Soep, E., The Work of Learning at Youth-Based Organizations: A Case for the Arts, Educational Researcher (December 1997) 26,9.

at least one activity), although they joined different activities. The study also shows that white eighth graders were more likely than young teens of color to be involved in out-of-school activities. The most striking difference separates low-income youths from their more affluent counterparts. For example, some 40 percent of eighth graders in the lowest-income quartile did not participate in any organized activity, while only 17 percent of youths in the highest-income group were not involved.[50]

Next, the issue of participation is closely related to that of access. Major barriers to participation that especially affect youths living in low-income areas include transportation, location of services (which includes safety considerations), and whether or not fees are required for services or for items such as uniforms. More subtle access issues--especially for young adolescents, who have "radar" about such matters--is whether or not participants will be made to feel welcome in the organization or program. Issues of race and gender, as well as physical ability/disability, influence young people's perceptions of access and decisions about participation.

Additionally, securing adequate financial resources is also a factor that influences who joins youth development programs. While little systematic research exists about funding patterns of youth organizations, it is clear that, in this country, the financing of youth development programs suggests they are viewed as "nice but not necessary." In general, it is fair to say that four words characterize the funding of youth development programs in American society: diversity, instability, inadequacy, and inequity.[51]

With respect to instability, although the funding picture for youth organizations has improved over the past decade, the field continues to struggle with an unstable funding base. Unlike public schools or the child welfare system, youth development has no major, permanent public funding streams, and is therefore at risk when changes occur in political winds or administrations. Despite recent increases in sources of support, youth development organizations must still compete with one another for their own slice

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[50] U.S. Department of Education, National Education Longitudinal Study of 1988: A Profile of the American Eighth Grader. Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, 1990.

[51] This section draws heavily on: Stem, L., Funding Patterns of Nonprofit Organizations that Provide Youth Development Services. Paper Commissioned by the Carnegie Task Force on Youth Development and Community Programs. Washington, DC: Carnegie Council on Adolescent Development, 1992.

of funding from a relatively small pie. Some observers attribute this problem to the lack of major public support for youth development or "primary" services.[52]

Inequity refers to the current funding patterns in the United States and how they generally contribute to the inequities of service delivery. Because local programs tend to be supported primarily by local funding sources, poor communities are less likely to be able to provide adequate youth development programs than are more affluent areas. Reliance on fees for service also means that youths from poor families are not able to participate in some of the nation's best-known programs.[53]

Meanwhile, a number of the national youth development programs receive widespread philanthropic and charitable support and, in some instances, more than they can actually use. For example, the national Boy Scouts of America organization has generated annual surpluses for several years in a row and now reports assets of more than $250 million. Similarly, Girl Scouts of the U.S.A. in 1995 reported $133 million in assets and an annual surplus of national revenues over expenses of $5.4 million.[54] By contrast, grass roots community-based youth programs are often fragile and highly "local" in both their purview and funding base.

Another factor that influences who joins youth development programs is coordination with other youth-supportive services, including schools.[55] The staff of youth development programs increasingly recognize the need to work in meaningful partnerships at other community institutions, especially schools. Rather than viewing schools as having responsibility for academic achievement while they are working on "everything else," community organizations are seeing youth development as a shared responsibility. This shift is generating profound changes around the planning, funding, and delivery of services as communities across the country experiment with new institutional arrangements on behalf of young people.

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[52] Wynn, J., Richman, H., Rubenstein, R. A. and Littell, J., Communities and Adolescents. An Exploration of Medical Support, Chicago: University of Chicago, Chapin Hall Center for Children, 1987.

[53] Jane Quinn, Where Need Meets Opportunity: Youth Development Programs for Early Teens, The Future of Children; Los Altos; Fall 1999.

[54] Ibid.

[55] Ibid.

2. Program Effectiveness

Participants at the Youth Development Issue Forum, held in 1994, identified six key ingredients that successful youth development programs should have: a comprehensive strategy with clear mission and goals; committed, caring, professional leadership; youth-centered activities in youth-accessible facilities; culturally competent and diverse programs; youth ownership and involvement; and a positive focus including all youth.[56] Effective youth development programs seek continuous improvement in their operations by continually monitoring performance, assessing programs against plans, evaluating results, and retooling their programs based on those evaluations. Effective youth development programs are comprehensive, intensive, flexible, and responsive.[57] They seek to integrate and involve all the domains in which a young person moves, including the home, school, community centers, the neighborhood, and the broader community. By weaving these programs together in a way that responds to the community's needs, they ensure that youth have access to all the components needed to grow into healthy, functioning adults.

Despite the extensive reach of youth development programs and the potential they have for promoting positive youth development, little systematic analysis of their effectiveness has been conducted. For years, youth organizations have relied on soft evidence of their effectiveness, including testimonials and self-reports by participants and their parents. Most youth development leaders, however, now realize that, in today's climate of accountability and management for results, such anecdotal accounts are of limited value. Instead, there is a push to establish “hard evidence” about program effectiveness. Therefore, outcome evaluations cluster around two types of programs: those that seek to prevent or reduce such problem behaviors as substance abuse and adolescent pregnancy; and those that promote normal socialization and positive development.

A 1996 Congressionally-mandated evaluation, intended to discover what works in preventing youth violence, reviewed over 500 prevention programs and

[56] Building Resiliency: What Works! A Community Guide to Preventing Alcohol and Other Drug Abuse Through Positive Youth Development, National Assembly 1994.

[57] A 1992 General Accounting Office Report, Adolescent Drug Use Prevention: Common Features of Promising Community Programs, Identified “A Comprehensive Strategy” as a Key Ingredient of Success.

categorized them into programs that worked and did not work, and those that were considered promising.[58] The study praised programs such as community-based mentoring by Big Brothers, Big Sisters of America, which substantially reduced drug abuse in one experiment; community-based after-school recreation programs which seemed to reduce crime in the vicinity of the recreation center; and Job Corps, an intensive residential training program for at-risk youth. One program in particular was found to reduce felony arrests and increase the earnings and educational attainment of its participants.

The earliest of three studies that looked at the effectiveness of basic, positive youth development programs was an evaluation of Boys and Girls Clubs that began as an assessment of the effectiveness of its SMART Moves (substance-abuse prevention) program. The evaluation matched five Clubs located in public housing settings that had implemented this targeted intervention with two control sites in each case: one public housing site with a Boys and Girls Club that did not offer SMART Moves and one public housing site that did not have a Club at all. The evaluators found that, although few differences in impact emerged between the Clubs that did or did not offer the SMART Moves program, larger differences separated housing projects that had Clubs from projects that did not have one.[59]

Among youths who lived in public housing and had access to a Boys Club or Girls Club, program participants were more involved in what was described as constructive education, social, and recreational activities. In addition, they were less involved in what was described as unhealthy, deviant, and dangerous activities. Adult family members in Club communities, compared with parents in the no-Club sites, were more involved in youth-oriented activities and school programs. The Clubs were associated with an overall reduction in alcohol and other drug use, drug trafficking, and drug-related crime.[60] In other words, this evaluation suggested that the presence of a

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[58] Richard F. Catalano et al., Positive Youth Development in the United States: Research Findings on Evaluations of Positive Youth Development Programs, November 13, 1998, [http://www.aspe.os.dhhs.gov/hsp/positiveyouthdev99].

[59] Jane Quinn, Where Need Meets Opportunity: Youth Development Programs for Early Teens, The Future of Children, Los Altos, Fall 1999.

[60] Boys Clubs of America. The Effects of Boys and Girls Clubs: An Alcohol and Other Drug Use and Related Problems in Public Housing Projects, New York: BCA 1991.

Boys Club or Girls Club and its core program (not just a targeted intervention) made a positive difference in the lives of children, their families, and other community residents.[61]

A second major study of the mentoring program provided by Big Brothers/Big Sisters of America also showed powerful effects.[62] To evaluate this core service, researchers studied nearly 1,000 10- to 16-year-olds who had applied to Big Brothers/Big Sisters for an adult mentor but were still on a waiting list. Half of these young people, randomly chosen, were matched with a Big Brother or Big Sister, while the rest stayed on a waiting list. Eighteen months later, the differences between the two groups were dramatic. The involvement of an adult mentor in a young person's life for just one year was found to have the following effects: first-time drug use was reduced by 46 percent (at a time when drug use among teenagers generally was on the rise); school absenteeism dropped by 52 percent; and violent behavior declined by 33 percent. Mentored youths were also more likely to perform well in school, get along better with family and friends, be less likely to assault someone, and be much less likely to start using alcohol. These effects were sustained for both boys and girls, and across races.[63]

A third study, looking at the Quantum Opportunities Program, found that long-term participation in a comprehensive year-round program had significant positive effects on economically disadvantaged high school youths.[64] The intervention developed for this research-demonstration project offered components that are typical of youth development programs, including academic enrichment and remediation, community service opportunities, academic and career counseling, adult mentors, and close peer relationships. Using a randomized design, this five-year longitudinal study in four sites

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61 Jane Quinn, Where Need Meets Opportunity: Youth Development Programs for Early Teens, The Future of Children, Los Altos, Fall 1999.

62 Ibid.

63 Tierney, J. P., Grossman, J. B. and Resch, N. L., Making a Difference: An Impact Study of Big Brothers/Big Sisters, Philadelphia: Public/Private Ventures, 1995.

64 Jane Quinn, Where Need Meets Opportunity: Youth Development Programs for Early Teens, The Future of Children, Los Altos, Fall 1999.

showed powerful results. Compared with youths in the control group, program participants showed lower teen pregnancy rates, and a higher level of community involvement.[65]

In September 1996, the Department of Health and Human Services awarded a grant to the Social Development Research Group at the University of Washington to examine existing evaluations of positive youth development programs and to summarize the state of the field.[66] The specific goal of the project was to identify elements contributing to both the success and lack of success in positive youth development programs and evaluations.

The most exemplary programs incorporated positive youth development constructs into universal or selective approaches with youth between the ages of six and 20. Although 27 positive youth development programs with evaluated interventions were selected and analyzed for their effects, only 25 of these programs were ultimately designated as "effective" based on the evidence presented in the evaluation. A total of 52 other programs were excluded from the evaluation because they did not meet the study's scientific criteria or because there was no evidence their program components produced an impact. One of the goals of the study was to analyze what the programs did, rather than to focus on how they were labeled. The study found that a number of programs traditionally considered primary prevention interventions incorporated many of the same constructs as programs usually viewed as positive youth development programs.[67]

The program material of the study was arranged according to how many social domains a particular program incorporated into its youth development framework. The first domain (Community/School) looked at eight positive youth development programs. Big Brothers/Big Sisters and Bicultural Competence Skills operated in the community domain, while Growing Healthy, Know Your Body, Children of Divorce, Life Skills

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65 Hahn, A., Leavitt, T. and Aaron, P., Evaluation of the Quantum Opportunities Program (QOP): Did the Program Work? Waltham, MA, Center for Human Resources, Heller Graduate School, Brandeis University, 1994.

66 Richard F. Catalano et al., Positive Youth Development in the United States: Research Findings on Evaluations of Positive Youth Development Programs, November 13, 1998, [http://www.aspe.os.dhhs.gov/hsp/positiveyouthdev99].

67 Ibid.

Training, The PATHS Project, and Project ALERT focused on children in the school domain. Positive youth outcomes in the community domain included greater self-control, assertiveness, healthy and adaptive coping in peer-pressure situations, improvements in school attendance, parental relations, academic performance, and peer emotional support. Positive youth outcomes in the school domain included better personal health management attitudes and knowledge, practices, greater assertiveness, sociability, problem-solving, frustration tolerance, increased acceptance of prosocial norms having to do with substance use, increased interpersonal skills and decision making, a higher capacity for managing one's reactions and behavior in social and emotional situations, greater self-efficacy with creating new solutions to problems, and increased empathy.

The second domain combined two social domains or components: School and Family. Seven effective youth development programs were conducted in combined family and school domains looked at eight positive youth development programs: Child Development Project, Fast Track, Metropolitan Area Child Study, Reducing the Risk, Seattle Social Development Project, Social Competence Program for Young Adolescents, and Success for All. These programs successfully changed youth outcomes, promoted positive youth development constructs and strategies, and incorporated parent or family involvement. One program, Teen Outreach, combined school and community domains. Improvements in positive youth outcomes included the following: greater social acceptance by and collaboration with peers, improved communication with parents and greater self-efficacy around contraceptive practices, higher achievement and school attachment, increased social acceptance by, involvement and cooperation with peers, problem-solving and creative solutions, improved cognitive competence and academic mastery, and improvements in acceptance of authority, classroom atmosphere and focus, and appropriate expression of feelings.[68]

The third domain looked at nine positive youth development programs: Across Ages, Adolescent Transitions Project, Midwestern Prevention Project, Project Northland, Responding in Peaceful and Positive Ways, Valued Youth Partnership, and Woodrock. These multiple-domain programs successfully promoted positive youth development

[68] Ibid.

strategies in school, incorporated parent or family involvement, and used community strategies or settings. Youth Development Project looked at family, school, and the community. Creating Lasting Connections looked at family, church, and community. Quantum Opportunities looked at school, workplace, and community. Positive youth outcomes included the following: more positive attitudes about older people and higher levels of community service, higher levels of social skills learning and school attendance, greater self-efficacy with respect to substance use refusal, higher reading grades and cognitive competence, and improvements in race relations and perceptions of others from different cultural or ethnic groups.[69]

All of the effective programs in this review addressed a minimum of five positive youth constructs. Most interventions addressed at least eight constructs, and three-domain programs averaged 10 constructs. Three constructs were addressed in all 25 well-evaluated programs: competence, self-efficacy, and prosocial norms. Table 2.3 lists the youth development constructs, percentage of programs that addressed each construct, and a working definition of each construct.

Table 2.3. Youth Development Program Construct Effectiveness.

CONSTRUCT	% (# OF PROGRAMS)	DEFINITION
Competency (Social, Emotional, Cognitive, Behavioral, and Moral)	100% (25)	A child's capacity for acquiring developmentally appropriate skills across social, emotional, cognitive, behavioral, and moral dimensions.
Self-Efficacy	100% (25)	A youth's perception that one can achieve desired goals through one's own action.
Prosocial Norms Opportunities for Prosocial Involvement	88% (22)	Healthy standards and clear beliefs. Events or activities in the intervention that encourage youth in prosocial actions.
Recognition for Positive Behavior	88% (22)	Reinforcement or acknowledgement for positive behavior.
Bonding	76% (19)	A youth's social attachment and commitment to others, including family, peers, school, community, and the culture(s).
Positive Identity	36% (9)	Not defined.
Self-Determination	16% (4)	Not defined.
Belief in the Future	8% (2)	Not defined.
Resiliency	48% (12)	Not defined.
Spirituality	8% (2)	Not defined.

From: Richard F. Catalano et al., Positive Youth Development in the United States: Research Findings on Evaluations of Positive Youth Development Programs, November 13, 1998.

[69] Ibid.

This study concluded that a wide range of positive youth development approaches could result in positive youth behavior outcomes and the prevention of youth problem behaviors. The themes common to the success of positive youth development involved methods to accomplish the following: strengthen social, emotional, behavioral, cognitive, and moral competencies; build self-efficacy; shape messages from family and community about clear standards for youth behavior; increase healthy bonding with adults, peers and younger children; expand opportunities and recognition for youth; provide structure and consistency in program delivery; and intervene with youth for at least nine months or more.[70]

F. FUNDING FOR YOUTH DEVELOPMENT PROGRAMS

The one factor that seems to have a direct impact on the level of effectiveness of youth development programs is whether the federal government supports it. In her article, "Federal Support for Youth Development," Kimberly Barnes-O'Connor talks about how the federal government is most effective in identifying a mission and facilitating efforts to achieve that mission rather than trying to accomplish the mission itself. [71] Barnes-O'Connor believes that federal policy on youth development and young adolescents can best serve the nation by identifying the direction the nation needs to travel and then helping communities obtain the necessary supplies for the "trip". She likens the federal role to that of steering a boat. That is, the role of the government is that of piloting the boat, not rowing it.[72]

Barnes-O'Connor points out that one key way the government steers the nation is through legislation authorizing programs and appropriating money for such programs. According to Barnes-O'Connor, unless a program is supported during the congressional appropriations process that allocates funds, the best-crafted laws will lie dormant. Also, because competition is fierce for human-service dollars (i.e., public health, welfare, education, and child welfare programs), the government's investment in youth development programs increases only when a compelling case is made for reallocating government money away from other programs.

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[70] Ibid.

[71] Kimberly L Barnes-O'Connor, Federal Support for Youth Development, The Future of Children, Los Altos, Fall 1999.

[72] Ibid.

The idea of youth development goes beyond the prevention of risky or bad behavior to the goal of helping young people acquire the skills and expertise that they will need to cope with the challenges of life and make a successful transition to adulthood. This destination can only be reached when federal policy help youths, families, and communities obtain the support and tools necessary for reaching their own destinations. This is where the second political hurdle arises--that of identifying the proper role for federal, state, and local governments to play with respect to both funding and policy change. Federal legislation should serve as a catalyst for community investment in young adolescents by providing incentives for businesses, schools, and other sectors of the community to create new opportunities and to eliminate barriers.

G. PUBLIC SUPPORT FOR YOUTH DEVELOPMENT PROGRAMS

Opinion polls reveal that the public is concerned about the nation's young people and supports programs that help schools and families provide the guidance that young adolescents need.[73] For example, a 1998 poll revealed that 93 percent of parents and non-parents support expansion of after-school activities, and more than 80 percent said they would be willing to have tax dollars used for this purpose.[74] Parents seem to want their children to attend after-school programs. More importantly, most believe the programs should focus on educational enrichment, such as computer clubs, arts classes, music courses, and community service.

H. CHAPTER SUMMARY

"At-risk" children are vulnerable to commit suicide, become victims of homicide, die from firearms/accidents, become high school dropouts, get arrested, be abused/neglected or suspended from school. For those who find themselves part of the juvenile justice system, a small number are habitual offenders. On the other hand, minority males make up the majority of such habitual offenders. However, proper intervention of a youth development program may help meet the needs that young adults so badly need in this critical time in their lives.

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[73] Jane Quinn, Where Need Meets Opportunity: Youth Development Programs for Early Teens, The Future of Children, Los Altos, Fall 1999.

[74] The Charles Stewart Mott Foundation, Poll Finds Overwhelming Support for After-School Enrichment Programs to Keep Kids Safe and Smart, Press Release, Flint, MI: The Charles Stewart Mott Foundation, September 24, 1998.

Specifically, designed to meet the developmental needs of young people, youth development programs do not require status, money, or have a negative label attached. Therefore, youth development programs may be in the best position to help develop a young adult's confidence, character and connectedness. Youth development programs vary in type, size and focus. Furthermore, participation in such programs may be influenced by things like income, gender, and race. Because of such influence, those youth desiring to participate may be able to find something that best meets their individual needs. Just how successful youth development program are at meeting the needs of young adults depends on three things: 1) how successful they are at addressing six key ingredients, 2) funding, and 3) public support.

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III. JUNIOR RESERVE OFFICERS' TRAINING CORPS (JROTC)

A. BACKGROUND

Despite a broad Congressional mandate, each military department operates their own JROTC program. JROTC was solely a program of the U.S. Army for the first five decades of its history. Established under the terms of the National Defense Act of 1916, the primary purpose of JROTC was the dissemination of military knowledge and values among the U.S. secondary school population. JROTC is currently authorized under Title 10 USC 2031, which requires the secretary of each military department to establish and maintain JROTC units. According to Title 10, the purpose of JROTC is "to instill students in United States secondary institutions the values of citizenship, service to the United States, and personal responsibility and a sense of accomplishment."[75] DoD directive 1205.13 lists another objective: develop in students an interest in military service as a career.[76] When JROTC got underway in 1919, approximately 45,000 students enrolled in the program. Over the next two decades, enrollment rose slowly and stood at approximately 72,000 by 1942.[77] From 1947 until enactment of the ROTC Vitalization Act of 1964, because of personnel shortages and inability to meet the various unit costs, the Department of the Army prevented further JROTC expansion.

In 1963, Secretary of Defense Robert McNamara ordered a reevaluation of defense spending, including expenditures for JROTC. The National Defense Cadet Corps (NDCC), designed to accommodate schools that wanted JROTC-like programs, had the same objectives as JROTC but cost less to operate. Therefore, the decision was made to drastically cut JROTC funding. Funds were then requested to convert JROTC units to NDCC units and only to sustain JROTC units in high schools with a distinctly military curriculum. Immediately following McNamara's announcement, DoD received more than 300 disapproving letters and telegrams regarding the cut in funding from

75 Department of Defense Instruction 1205.13, December 26, 1995.

76 Ibid.

77 Center for Strategic & International Studies (CSIS), Junior Reserve Officers' Training Corps Contributions to America's Communities: Final Report of The CSIS Political-Military Studies Project on the JROTC (CSIS May 1999).

members of Congress, heads of educational institutions, and individual citizens.[78] During hearings on this bill, DoD proposed that all JROTC units be studied to survey the needs and preferences of a cross section of high schools. An ad hoc committee of 11 members (9 of whom were from the military) convened and reported that JROTC had successfully met its limited objectives, and any attempt to eliminate the program would bring renewed public protest. This committee also reported that there was substantial national interest in continuing and expanding JROTC.[79]

From the military's point of view, JROTC provided only marginal benefits. The ad hoc committee, however, felt that the program should encourage better citizenship on the part of high school students through disciplined military training. This conclusion was based on a survey of authorities of secondary-school systems, community leaders, and parents that strongly supported JROTC as a necessary addition to the typical high school curriculum. Furthermore, the committee recommended legislation to authorize participation by the other military services in an expanded JROTC program.[80]

The number of Army JROTC units more than doubled in the decade following passage of the ROTC Vitalization Act of 1963. By 1973, the Vietnam War and the end of conscription had placed new pressures on military education in secondary schools.[81] The Army undertook to make its JROTC program more appealing to a high school population that had become suspicious of the military. Junior cadets were authorized to enlist in the regular Army in advanced grades ranging from E-2 (Private) through E-4 (Corporal), depending on their performance and experience in JROTC. Additionally, qualified graduates were given a special "honors" category for nomination to a military academy.

In 1972, a court ruled that excluding young women from JROTC was discriminatory, and students of both genders were permitted to enroll. In 1976, President Ford signed Public Law 94-361, which raised the total authorized number of JROTC units from 1,200 to 1,600. This law was intended to encourage JROTC expansion by

78 Ibid.

79 Ibid.

80 Ibid.

81 Ibid.

lowering the minimum required number of cadets per unit from 100 to any amount not less than 10 percent of the number of students registered at the host school. From 1983 to 1985, the Army enlarged its JROTC program by some 60 units per year, bringing the total close to the maximum permitted number.[82]

The FY 1993 National Defense Authorization Act raised the maximum allowable number of JROTC units from 1,600 to 3,500. However, this number did not address the question of funding. That issue was left to the discretion of DoD and the individual services. Although the new legislation authorized as many as 3,500 JROTC units, the services aimed to achieve a more modest target of 2,900 units, which was originally proposed by President George Bush.[83]

The pre-expansion JROTC program totaled 1,481 units, with 1,452 located in the U.S. and the remaining 29 in U.S. territories, trust properties, and overseas DoD-dependent schools. However, the strongest JROTC presence was in a crescent-shaped area stretching from Texas to the Gulf Coast, through the southeastern United States, and up the mid-Atlantic region to Maryland. The five states with the most units (amounting to approximately 40 percent of the total strength) were Texas (167), Florida (120), California (150), North Carolina (100), and Georgia (90).[84] Because unit placement was always a function of local school demand, the over-representation of these areas simply reflected the lack of a coherent plan on the part of DoD or the services to ensure geographic balance.[85]

The move to expand JROTC emphasized placing units in areas where the program was most underrepresented, such as the northern plains, the populous northeast, and especially New England. States with few or no JROTC units were Montana (0), Vermont (1), South Dakota (1), Oregon (1), and 6 states (Delaware, Idaho, Iowa, Maine, New Hampshire, and North Dakota) with 2 units each.[86] Table 3.1 shows JROTC expansion by region. According to original expansion estimates, 63 units were projected to begin

82 Ibid.

83 Ibid.

84 Ibid.

85 Ibid.

86 Ibid.

operation in 1992, 466 unit in 1993, and the remaining 890 units in 1994, for a total of 1,419 new units. The total number of new units established during the expansion period amounted to 1,103, which is less than 80 percent of the planned number.

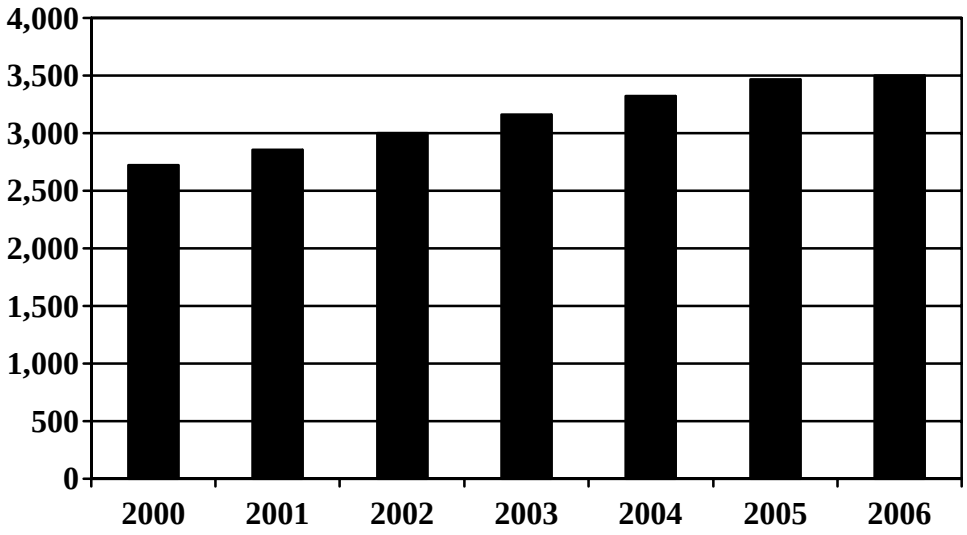
Table 3.1. JROTC Regional Growth Trends, 1992-1996.

REGION	UNITS IN 1992	UNITS IN 1996	% INCREASE
New England	23	55	139
Overseas	29	62	113
Mid-Atlantic	70	137	95
West North Central	53	103	94
Pacific	135	253	87
South Atlantic	491	886	80
West South Central	253	415	64
East South Central	204	326	59
Mountain	88	138	56
East North Central	135	209	55
Total	**1,481**	**2,584**	**74**

From: Center for Strategic & International Studies (CSIS), Junior Reserve Officers' Training Corps Contributions to America's Communities: Final Report of the CSIS Political-Military Studies Project on the JROTC (CSIS May 1999).

Despite the shortfall in the number of new units, the services were somewhat more successful in some other areas. Before the mid-1990s expansion, the services had established JROTC units in 409 inner-city schools, representing 28 percent of all units. The Army had the most inner-city units (272), followed by the Navy (86), the Air Force (32), and the Marine Corps (19). The five states with the most inner-city units were California (63), Texas (54), Illinois (31), Alabama (31), and Tennessee (29). Increasing JROTC presence in inner-city schools was a primary goal during the expansion: 515 (47 percent) of the 1,103 new units were started in urban areas (defined as cities with populations greater than 150,000), for a post-expansion total of 924 inner-city units. After completion of the expansion program, the five states with the most inner-city units were Texas (124), California (96), Florida (65), Georgia (51), and Maryland (42).

Figure 3.1 shows the DoD JROTC unit expansion plan for FY 2000-2006. As seen here, the number of JROTC units is expected to increase to more than 3500 by 2006.



From: Office of Assistant Secretary of Defense (Force Management Policy), August 26, 2001.

Figure 3.1. DoD Unit Expansion Plan, 2000-2006.

B. JROTC TODAY

For more than 75 years, the Pentagon has overseen JROTC programs at high schools throughout the United States. Run by each service, JROTC programs hire retired military personnel to instruct students in service-specific historical, technological, and geographical topics and to train students in self-discipline, leadership, courtesy, and citizenship. Patterned after military units, JROTC programs also instruct students in marching, drilling, and respect for authority. JROTC courses augment, but do not supplant, students' normal course loads and graduation requirements.[87]

Today, some 450,000 students are enrolled in more than 2,900 JROTC programs nationwide.[88] (This number breaks down by Service as follows: Army, 243,000; Air Force, 109,000; Navy, 75,000; and Marine Corps, 23,000.) Unlike ROTC, JROTC training does not incur a military service obligation. JROTC goals include the following: enhancing awareness of the rights, responsibilities, and privileges of citizenship;

87 Ibid.

88 Lawrence M. Hanser and Abby E. Robyn, Implementing High School JROTC Career Academies, RAND National Security Research Division 2000.

developing each student's sense of personal responsibility; building life skills; and providing leadership opportunities.[89]

As noted, the four major military services each operate their own JROTC program.[90] Each service maintains a somewhat different focus in its curriculum and instruction. For example, the Army and Marine Corps concentrate almost exclusively on the leadership and citizenship aspects of the JROTC mission; the Air Force and Navy programs contain extensive instruction in naval science and aerospace science, respectively.

C. DEMOGRAPHIC PICTURE

JROTC programs are currently operating in high schools in all 50 states and four U.S. territories. In addition, DoD schools have programs in Japan, Korea, Germany, Italy, Belgium, the Netherlands, Great Britain, American Samoa, and the Northern Marianas. The 2,587 high schools currently with programs account for approximately 10 percent of U.S. public and private high schools.[91]

The latest reports provided by DoD indicate that 924 units are currently in inner-city high schools, representing 36 percent of the total. JROTC is under-represented in such large cities as New York, Philadelphia, Detroit, Phoenix, Indianapolis, Boston, Cleveland, Denver, Kansas City, St. Louis and Columbus, Ohio, which apparently have school systems that place a lower priority on establishing units. DoD states that, at the height of JROTC expansion activity in 1995, all services participated in assisting disadvantaged schools in establishing JROTC units and that enhanced funding was provided to 324 needy schools (13 percent of all units). The JROTC investment was estimated at nearly $9 million in predominantly inner-city schools.[92]

The composition of JROTC enrollees has undergone noteworthy changes over the past few years that have redefined the program. For example, Table 3.2 shows the

[89] Ibid.

[90] Center for Strategic and International Studies (CSIS), Using Military Capabilities to Help Young Adults in U.S. Inner-City Areas: A Report by the CSIS Political- Military Studies Program and the National Urban League Joint Study Group, Washington, D.C.: CSIS, March 1997.

[91] For the most accurate figures for the total number of high schools see U.S. Department of Education, Schools and Staffing in the U.S.: Selected Data for Public and Private Schools, 1993-1994.

[92] Office of the Assistant Secretary of the Defense (FMP), Expansion of the Junior Reserve Officers' Training Corps Program, October 1996.

proportion of female JROTC cadets has risen slightly over the past few years, from 41 percent in 1994 to 43 percent three years later. (By way of comparison, young women constituted 48 percent of the total high school population in 1995.) Given the fact that total cadet enrollment has increased by more than 70,000 over the past three years, this change is even more notable. Because none of the services have added new units in the past two years, all of the enrollment growth is a result of current units increasing their number of cadets, which shows that JROTC is successful in appealing to young people and communities after units have been established.

Table 3.2. Percentage of JROTC Enrollees by Demographic Group Selected Years, 1994-1998.

DEMOGRAPHIC GROUP	1994-1995	1995-1996	1996-1997	1997-1998
Females	40.8	41.9	42.2	43.2
White	49.6	42.8	41.4	- -
African-American	25.6	33.2	33.2	- -
Hispanic	9.4	9.7	10.3	- -

From: Center for Strategic & International Studies (CSIS), Junior Reserve Officers' Training Corps Contributions to America's Communities: Final Report of the CSIS Political-Military Studies Project on the JROTC (CSIS May 1999).

It can also be seen in Table 3.2 that the proportion of white JROTC members is relatively low and declining. Although whites made up 73 percent of the total high school population in 1995, their enrollment percentage in JROTC has decreased proportionately during the 1990s from about 50 percent in 1994 to 41 percent two years later. This may be more a by-product of program location than anything else. However, the decline in white enrollment cannot be attributed solely to that factor without detailed demographic analyses. At the same time, the proportion of African-American students increased by nearly 8 percentage points during the period of JROTC expansion. It is important to note here that African Americans made up only 15 percent of the total high school population as of 1995. Finally, enrollment by Hispanic students rose slightly in the period shown from 9.4 to 10.3 percent. Hispanics made up 12 percent of the total high school population in 1995.

D. JROTC IN THE FOUR SERVICES

JROTC includes four distinct programs run cooperatively by the Departments of the Army, Air Force, and Navy. As stated earlier, each military service has its own organization for developing and overseeing its JROTC program, and each has a distinctive four-year curriculum. The Army operates the largest and oldest JROTC program, which has approximately 1,370 units nationwide.[93] Key objectives of Army JROTC, in accordance with the established JROTC mission include: promoting citizenship; developing leadership; enhancing communication skills; strengthening self-esteem; providing the incentive to live drug free; encouraging an appreciation of the military services and their accomplishments; improving physical fitness; promoting high school graduation; and helping participants to work as a team member.

Major curriculum subject areas in Army JROTC (AJROTC) include citizenship, leadership, physical education, and communication.[94] The focus is on student-centered participatory learning. The Army states that its curriculum is aligned with three national strategies – the National Education Goals (Goals 2000)[95], the Secretary of Labor's Commission on Achieving Necessary Skills (SCANS), and the President's Summit (America's Promise)[96].

The Air Force JROTC (AFJROTC) program, with 609 units worldwide, is the second largest of the Armed Services. The AFJROTC program falls under command of the Air Education and Training Command (AET/CC), Maxwell Air Force Base, Montgomery, Alabama. Its stated mission is "to educate and train high school cadets in citizenship; promote community service; instill responsibility, character and self-

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93 U.S. Army Cadet Command Briefing, "Army JROTC Curriculum", April 28, 1997.

94 Center for Strategic & International Studies (CSIS), Junior Reserve Officers' Training Corps Contributions to America's Communities: Final Report of The CSIS Political-Military Studies Project on the JROTC (CSIS May 1999).

95 The National Education Goals Panel (NEPG) is an independent executive branch agency of the federal government charged with monitoring national and state progress toward the National Education Goals, [http://www.nepg.gov/].

96 America's Promise is a 501(c)(3) not-for-profit organization funded by public and private grants and contributions. The organization's mission is to mobilize people from every sector of American life to build the character and competence of our nation's youth by fulfilling Five Promises for young people, [http://www.americaspromise.org./].

discipline; and provide instruction in air and space fundamentals."[97] As in Army JROTC, the overall mission of AFJROTC is divided into several objectives. The AFJROTC curriculum is a four-year program, divided into two categories: academics (primarily aerospace science) and leadership (e.g., citizenship, self-reliance, and communication skills).[98]

The Naval JROTC (NJROTC) program, with 435 high school units, is the third largest of the Armed Services. Established by Public Law 88-647 on October 13, 1964, NJROTC falls under the command of the Chief of Naval Education and Training (CNET), Pensacola, Florida. The stated purpose of NJROTC, as stipulated in legislation, is "to instill in students in United States secondary education institutions the values of citizenship, service to the United States, personal responsibility and a sense of accomplishment."[99] The supporting objectives outlined in Instruction 1533.9J (e.g., developing informed and responsible citizens, promoting a healthy and drug-free life, encouraging the completion of high school) are similar to those described above in the discussion of Army JROTC. The principal vehicle for attaining these objectives is the Navy program of instruction, which includes components pertaining to such topics as leadership, citizenship, drug-abuse prevention, career planning, the past and present Navy, nautically relevant aspects of natural science, first aid, and survival training.[100]

The Marine Corps JROTC (MCJROTC) program, with just 174 high school units worldwide, is the smallest of the service programs. MCJROTC has units in 39 of the 50 states and none in Puerto Rico, Guam, the Virgin Islands, or the District of Columbia. One MCJROTC program operates in a DoD school in Japan. The MCJROTC program office falls under the command of the Training and Education Division, Quantico, Virginia. According to Department of the Navy, Marine Corps Order P1533.6C June 7, 1989, the mission of MCJROTC is "to provide a course in leadership education to

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97 Air Force Instruction 36-2010 (Draft), March 20, 1998.

98 U.S. Air Force, Air Force Junior Reserves Officers' Training Corps Curriculum Guide, June 1997.

99 Department of the Navy, CNET Instruction 1533.9J, July 10, 1996.

100 Center for Strategic & International Studies (CSIS), Junior Reserve Officers' Training Corps Contributions to America's Communities: Final Report of The CSIS Political-Military Studies Project on the JROTC (CSIS May 1999).

develop informed citizens, strengthen character by teaching of discipline, and develop an understanding of the responsibilities of citizenship."[101]

E. CAREER ACADEMIES

The Department of Defense (DoD) first announced its plan to jointly establish military career academies with the Department of Education in 1992. Known as "career academies" and "partnership academies", these more intensive JROTC programs combine JROTC with an occupationally-focused curriculum. A career academy is a type of school-within-a-school that provides a college-preparatory curriculum with a career-related theme. Career academies and partnership academies generally share three basic features: academies are small learning communities, academies combine a college-preparatory curriculum with a career theme, and academies embody partnerships with employers.[102]

In the 1990s a number of states and cities began to sponsor career academies. For instance, the Illinois State Board of Education started 20 California-style academies in 1994-95, expanding to about 50 in 2000. Cities with growing numbers of academies include Atlanta, Chicago, Denver, Sacramento, Seattle, Oakland, and Washington, D.C.[103] Because there is no single authoritative definition, a precise national count of career academies would be difficult. However, the number of career academies has been expanding rapidly, in part because academies have been found to be effective, and in part because they embody ideas promoted by several major high school reform movements. After more than three decades of development and two decades of evaluation, career academies have been found to be effective in improving the performance of students in high school.[104] Career academies have therefore become the most durable and best-tested component of a high school reform strategy that includes dividing large schools into smaller units.

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[101] U.S. Marine Corps, Junior Reserve Officers' Training Corps Program Pamphlet, HQ Marine Corps Training Command, Quantico, Virginia, 1989.

[102] [http://casn.berkeley.edu/buildingblocks.html], October 2002.

[103] Ibid.

[104] Ibid.

One good reason why growing numbers of states, districts, and schools have decided to start career academies is that they have been found to be effective in improving students' performance. In a study conducted by Hanser, data from three JROTC career academies in large cities were compared with data from other career academies, JROTC students not in academies, and students not participating in any academy. Hanser concluded that students in JROTC career academies generally received higher grades, had better attendance, completed more credits, and were less likely to drop out, compared to statistically similar students not in academies.[105] Kemple and Snipes concluded that academy students overall earned a larger number of course credits and were more likely to have positive developmental experiences.

Furthermore, that among students at highest risk of school failure, academy students attended school more regularly, earned more course credits, were more likely to participate in extracurricular activities and volunteer projects, and were less likely to be arrested. Dropout rates for the "at-risk" students was reduced from 32 percent in a control group to 21 percent among career academy students.[106] Other studies found similar findings, to include, higher student satisfaction, grade point averages, improved post-secondary outcomes and significantly better, particularly for at-risk students, than for general education or vocational students.[107]

F. FUNDING FOR JROTC

Just as the values and direction of the JROTC program have been debated for decades, JROTC funding continues to be controversial. Recent funding data for the separate service components are summarized in Table 3.3. During the past five years, the overall average amount spent per cadet has generally declined. Given the external pressures to provide better programs, to increase student enrollment, and to reduce

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[105] Hanser, L. M., Elliott, M. N. and Gilroy, C. L., Evidence of Positive Student Outcomes in JROTC Career Academies, Santa Monica, CA: National Defense Research Institute, RAND, 2001, [http://www.rand.org/publications/MR/MR1200].

[106] [http://casn.berkeley.edu/buildingblocks.html], October 2000.

[107] Michael E. Wonacott, Career Academies as Smaller Learning Communities In Brief: Fast Facts for Policy and Practice No. 20, The National Research and Dissemination Centers for Career and Technical Education, 2000, [http://www.nccte.org/publications/infosynthesis/in-brief/in-brief20/index.asp].

duplicate functions in the four service headquarters, a widening gap appears to have developed between mission and resources.[108]

Because of the massive pressure on current and future DoD budgets, the long-term funding picture is likely austere. Historically, funding reductions had been passed downward and all subordinate services and organizations had taken their share of the cuts.[109] These strains became more severe as the federal government continued its efforts at fiscal restraint. JROTC was at the mercy of training command budgets that continued to dwindle, and the future survival, improvement, and any expansion of JROTC required considerable congressional support and some innovative solutions that represented permanent change.[110]

Table 3.3. Summary of JROTC Funding, by Service Program, FY 1995-FY 1999.

SERVICE PROGRAM	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999
Army JROTC					
Appropriations ($ millions)	84,619	83,039	86,741	87,549	87,503
Average Cadet Enrollment	167,534	204,821	206,774	198,637	198,748
Investment per Cadet ($)	505	405	419	441	440
Navy JROTC					
Appropriations ($ millions)	33,327	34,553	32,358	30,518	30,581
Average Cadet Enrollment	51,445	52,774	59,757	63,342	58,994
Investment per Cadet ($)	648	655	541	482	518
Marine Corps JROTC					
Appropriations ($ millions)	9,537	14,167	12,005	12,016	12,385
Average Cadet Enrollment	16,864	16,801	21,924	22,446	22,968
Investment per Cadet ($)	566	843	548	535	539
Air Force JROTC					
Appropriations ($ millions)	29,902	32,023	33,122	34,182	36,007
Average Cadet Enrollment	67,802	82,294	91,284	95,849	100,642
Investment per Cadet ($)	441	389	363	357	358
JROTC Totals					
Appropriations ($ millions)	157,385	163,782	164,226	164,265	166,476
Average Cadet Enrollment	303,645	356,690	379,739	380,274	381,352
Investment per Cadet ($)	518	459	432	432	437

From: Department of Defense, OASD/FMP/MPP/AP, April 13, 1998; and FY 1999 President's Budget.

108 Center for Strategic & International Studies (CSIS), Junior Reserve Officers' Training Corps Contributions to America's Communities: Final Report of the CSIS Political-Military Studies Project on the JROTC (CSIS May 1999).

109 Ibid.

110 Ibid.

Table 3.4 shows the projected funding for FY 2002-2007 by the Office of Assistant Secretary of Defense (Force Management Policy). The funds, primarily from the DoD Operation and Maintenance (O&M) account, provide for instructor salaries/travel, curriculum, equipment, and supplies, printing/mail, maintenance repairs, and headquarters and staff. Here again, funding levels are shown by branch of service. Funding for Resources and Programs (uniforms, alterations, cadet travel, summer training, etc.) is treated separately.

Table 3.4. Summary of JROTC Projected Funding, by Service Program, FY 2002-FY 2007.

SERVICE PROGRAM	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Army JROTC					
Appropriations ($ millions)	97.2	101.8	106.4	108.3	110.9
Average Cadet Enrollment	234,217	245,301	256,386	260,964	267,229
Investment per Cadet ($)	415	415	415	415	415
Navy JROTC					
Appropriations ($ millions)	35.5	38.1	- - -	- - -	- - -
Average Cadet Enrollment	75,212	80,720	- - -	- - -	- - -
Investment per Cadet ($)	472	472	- - -	- - -	- - -
Marine Corps JROTC					
Appropriations ($ millions)	13.5	13.8	13.9	14.4	14.8
Average Cadet Enrollment	24,680	25,229	25,411	26,325	27,057
Investment per Cadet ($)	547	547	547	547	547
Air Force JROTC					
Appropriations ($ millions)	43.2	47.3	- - -	- - -	- - -
Average Cadet Enrollment	90,000	98,542	- - -	- - -	- - -
Investment per Cadet ($)	480	480	- - -	- - -	- - -
JROTC Totals					
Appropriations ($ millions)	189.3	201	210.1	214.7	219.8
Average Cadet Enrollment	378,600	402,000	420,200	429,400	439,600
Investment per Cadet ($)	500	500	500	500	500

From: Office of Assistant Secretary of Defense (Force Management Policy), August 16, 2001.

G. RESEARCH STUDIES ABOUT JROTC

Key performance measures show that JROTC cadets attend class more frequently, are less likely to drop out of school, and are more likely to graduate than their peers. The effectiveness of the JROTC program is evaluated against the objectives that support the mission, which is "to motivate young people to be better citizens."[111] Supporting objectives include: promoting citizenship; developing leadership; enhancing communication skills; strengthening self-esteem; providing the incentive to live drug

111 Ibid.

free; learning to appreciate the military services and their accomplishments; improving physical fitness; promoting high school graduation; and learning to work as a team member.[112]

The JROTC program of instruction includes teaching citizenship, leadership, communications, military history, drug awareness and physical fitness. Teamwork, improved self-esteem, and high school graduation are the result of two factors, the total program and JROTC instructors' active mentorship and guidance. Although certain limitations prevent precise measurement, it is undeniable that JROTC produces positive results.[113]

Teaching core values and developing character are an integral part of the JROTC program. Similar claims are made by others. According to Farmer, JROTC Cadets are committed to upholding the values which made this nation great. He goes on to describe that the instructors infuse students with the democratic values they need for life. Lutz and Bartlett stated that proponents claim that it instills discipline and changes the behavior of unruly teenagers so they can be productive citizens. This opinion was supported by Bartlett and Lutz who stated that JROTC is no longer job training for the military, but a life skills' curriculum that is particularly effective with at-risk students.

Reiger and Demoulin conclude that JROTC programs help to develop "democratic maturity" in students.[114] Their investigation provides strong support that the JROTC curriculum has a positive effect on student behavior. This conclusion is based on their research with 75 JROTC students in one high school and 74 students in a non-JROTC school. Koki, in writing about the JROTC program, describes a "whole person

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112 Ibid.

113 Corbett, "The Demand for Junior Reserve Officers' Training Corps (JROTC) in American High Schools;" and LTC John R. Hinson, SAMR, August 3, 1998, Subject: Army Junior Reserve Officers' Training Corps (JROTC) & National Defense Cadet Corps (NOCC) Program.

114 Reiger, R. C., and Demoulin, D. F. (2000), Comparing Democratic Maturity Test Scores Between High School Army JROTC Cadets and Other Students. Haywood High School, Education, 121(1), pp. 43-45.

approach" that fostered an appreciation of ethical values and principles. He claimed that students were instilled with discipline, motivation, pride, and a sense of integrity, trust, and belonging.[115]

If character traits can be taught, JROTC students should exhibit superior behavior character traits than other students in the same high school who are not enrolled in JROTC.[116] These character traits included the following: integrity/fairness, respect for self, others and property, honesty, forgiveness, kindness, self control/discipline, responsibility/dependability/accountability, compassion/empathy, patriotism/citizenship, perseverance/diligence/motivation, cooperation, humility, courtesy/politeness, tolerance of diversity, generosity/charity, and sportsmanship. Theoretically, this should occur because students who are enrolled in a JROTC program are being trained to be good citizens.

In another study, Bulach focused on the characteristics of an exemplary JROTC program. Students in the program are described as superior in demeanor and behavior to the rest of the student body. During the most recent ten-year period, 30 graduates had gone on to the U.S. Military Academy. This was the first time in the history of West Point that so many students were admitted from the same high school. Believing this to be the ideal situation to discover if character traits can be taught, Bulach visited the principal of the school and asked permission to conduct an investigation. Permission was granted to see if students who were enrolled in the JROTC program differed significantly on behaviors associated with 16 character traits when compared to students who were not enrolled in the JROTC program. Bulach's study emphasized responsibility, dependability, honesty, and other character traits that are very similar to those found in many character education curriculums. Furthermore, students in these programs volunteered for them. Therefore, they were willing to embrace the ideas and behaviors that were being taught.

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115 Koki, S. JROTC Program Earning Distinction in Commonwealth of the Northern Mariana Islands, Educational Innovations in the Pacific, 1997.

116 Cletus R. Bulach, Comparison of Character Traits for JROTC Students Versus Non-JROTC Students, Education; Chula Vista; Spring 2002.

A comparison of JROTC scores with non-JROTC scores on the individual behaviors for each character trait revealed that JROTC scores were superior on 94 out of 96 behaviors. The idea that the curriculum of the JROTC program is capable of changing the behavior of students in that program in a positive direction is evidenced by these scores. One factor that played a major role in the positive change in behavior for JROTC students is that all students volunteered to join the program. They joined because they want to be part of something special. Although all students cannot be athletes, cheerleaders, or in the band, all students can be part of the JROTC program. The "building block" approach of the curriculum is another factor that could account for the superior behavior of the JROTC students. Bulach's study provides clear support that the JROTC curriculum has a positive effect on student behavior.[117]

Raymond Schmidt is another researcher who looked at scores of JROTC cadets at the annual Military Order of the World Wars Leadership Training program.[118] A comparison of the 64 JROTC cadet scores with 1,913 typical high school students showed that on every one of the 12 Personal Development Test scores, the JROTC students were higher. Based on the Sign Test in Non-parametric Statistics, JROTC students scored significantly higher than the 1,913 typical high school students; eight of the 13 Personal Development Test scores showed statistical significance at the 0.003 or better level favoring JROTC cadets; and, in spite of the fact that JROTC cadets were younger on average than the typical high school students, their personal development scores were higher.

Cassel and Standifer also looked at the key elements that determined the effectiveness of all leadership – the leadership decision pattern – between JROTC high school cadets and college students associated with school administration.[119] The study sought to compare JROTC students with beginning school administrator students on The

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[117] Ibid.

[118] Raymond Schmidt, JROTC Cadets in Leadership Training Display Significantly Higher Personal Development Than Typical Students, Education; Chula Vista; Winter 2001.

[119] Russell N. Cassel and Thomas Standifer, Comparing the Leadership Development Between High School JROTC Cadets and Beginning College School Administrator Students, Education; Chula Vista; Spring 2000.

Leadership Ability Evaluation by Cassel and Stancik.[120] One-hundred high school Air Force JROTC cadets, ranging in age from 14 to 23 years, participated in the study. The comparative group consisted of 171 beginning college students in school administration. Their findings suggest that high school JROTC cadets can match about equally the leadership ability of college students in introductory courses for school administration.[121] In comparing JROTC cadets with college students, the study found that the Air Force high school cadets were generally superior to college students in terms of leadership ability. As noted previously, unlike college ROTC, the junior programs are not designed to funnel students directly into the armed forces, but rather to focus on general citizenship and military-related skills.

The Denver Public School System attempted to assess the performance of its JROTC program during the mid-1990s. Two satisfaction surveys were administered: one to JROTC students and another to school administrators.[122] The student satisfaction surveys were administered to JROTC students at all of Denver's ten high schools. Table 3.5 gives a detailed breakdown of the responses to individual questions. Some questions (as denoted by an asterisk) were deemed appropriate only to students who had been in JROTC for at least a year, and thus only responses from Leadership Education Training (LET) 2, LET 3, and LET 4 students are included in the results.

The survey results presented in Table 3.5 show that students were generally satisfied with JROTC. Of all students completing the survey, 92 percent were satisfied ("Strongly Agree" or "Agree") with the JROTC program at their school. Over 80 percent of non-first-year JROTC students stated that JROTC helped them gain various skills such as leadership, discipline, communication, and goal orientation as well as strengthening other academic areas. Eighty-five percent of these students also recognized JROTC as a primary means of helping them develop a plan for the future.[123]

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120 Ibid.

121 Ibid.

122 Report to the Board of Education, Junior Reserve Officers' Training Corps (JROTC) Program Evaluation, Office of Program Evaluation, November 1996.

123 Ibid.

Table 3.5. Student Satisfaction Survey Results, 1996.

	Strongly Agree	Agree	Disagree	Strongly Disagree
The JROTC classes that I am taking are academically challenging.	202 19.3%	690 65.8%	128 12.1%	29 2.8%
The JROTC instructors are knowledgeable of the topics covered in class.	585 55.9%	409 39.1%	44 4.2%	9 .9%
The JROTC program has helped me to become*:				
a. a stronger leader	228 55.5%	153 37.2%	20 4.9%	10 2.4%
b. more disciplined	205 51.6%	148 37.3%	33 8.3%	11 2.8%
c. a better communicator	189 47.7%	157 39.6%	34 8.6%	16 4.0%
d. more goal oriented	180 45.5%	166 41.9%	37 9.3%	13 3.3%
e. strong in other academic areas	133 33.8%	181 46.1%	60 15.3%	19 4.8%
Overall, I am satisfied with the JROTC program at my school.	577 55.0%	391 37.2%	55 5.2%	27 2.6%
The JROTC program has helped me to develop a plan for my future after graduation*	178 49.9%	125 35.0%	46 12.9%	8 2.2%
		Yes	**No**	
I plan to continue taking JROTC classes in the future**		694 84.4%	128 15.6%	
Because of the knowledge I have gained through the JROTC program, I plan to join the military after graduation*.		171 47.1%	192 52.9%	

From: Report to the Board of Education, Junior Reserve Officers' Training Corps (JROTC) Program Evaluation, Office of Program Evaluation, November 1996.
* Only 2, 3, & 4-year students (LET2, LET3, LET4) are included in these data.
** Seniors & LET 4 students are not included in these data.

The second survey was given to school administrators, completed by either the principal or assistant principal. The results of the survey are presented in Table 3.6. Responses were overwhelmingly positive from administrators with regard to the JROTC program at their school. The total number of survey respondents was quite small (10

administrators), but all strongly agreed or agreed that JROTC helped students become stronger leaders, more disciplined, more goal-oriented, better communicators, and stronger in other academic areas. Additionally, administrators stated that JROTC provided support to the school's overall functioning, and most agreed that JROTC students generally exhibited fewer disciplinary problems and had a better idea of what they wanted to do in the future. Some of the primary strengths of JROTC cited by administrators were its focus on leadership development and discipline, the quality of its instruction, and its effectiveness in keeping at-risk students on track.[124]

Table 3.6. School Administrators Satisfaction Survey Results, 1996.

	Strongly Agree	Agree	Disagree	Strongly Disagree
The JROTC program has helped students at my school become*:				
a. stronger leaders	6 60.0%	4 40.0%	0 0%	0 0%
b. more disciplined	6 60.0%	4 40.0%	0 0%	0 0%
c. more goal oriented	4 40.0%	6 60.0%	0 0%	0 0%
d. better communicators	5 50.0%	5 50.0%	0 0%	0 0%
e. strong in other academic areas	5 50.0%	5 50.0%	0 0%	0 0%
The JROTC program is a positive component of my school's curriculum.	8 88.9%	1 11.1%	0 0%	0 0%
The JROTC program in my school provides support to the school's overall functioning and extracurricular programs.	7 70.0%	3 30.0%	0 0%	0 0%
Students involved in JROTC generally exhibit fewer discipline problems.	3 30.0%	6 60.0%	1 10.0%	0 0%
The JROTC students have a better idea of what they want to do in the future than do students not taking JROTC.	0 0%	9 90.0%	1 10.0%	0 0%
Overall, I am satisfied with the JROTC program at my school.	7 70.0%	3 30.0%	0 0%	0 0%

From: Report to the Board of Education, Junior Reserve Officers' Training Corps (JROTC) Program Evaluation, Office of Program Evaluation, November 1996.
* Only 2, 3, & 4-year students (LET2, LET3, LET4) are included in these data.
** Seniors & LET 4 students are not included in these data.

[124] Ibid.

From the Army's standpoint, JROTC effectiveness is evaluated against the objectives that support the mission, which is "to motivate young people to be better citizens."[125] Objectives that support the mission include: promoting citizenship; developing leadership; enhancing communication skills; strengthening self-esteem; providing the incentive to live drug free; learning to appreciate the military services and their accomplishments; improving physical fitness; promoting high school graduation; and learning to work as a team member.[126] Teamwork, improved self-esteem, and high school graduation derive from the total program and JROTC instructors' active mentorship and guidance. Although precise measurement of the program's accomplishments is difficult, JROTC clearly produces positive results.[127]

Over the past several years, a special effort has been made to align the program with three national educational strategies--the National Education Goals, the Secretary of Labor's Commission on Achieving Necessary Skills, and the President's Summit.[128] The latest leadership education and training materials in JROTC have added staff rides and blocks of instruction on etiquette, nutrition, conflict resolution, multicultural diversity, geography, the environment, and service learning opportunities. Since 1992, the US Army Cadet Command has taken various steps to improve JROTC program administration and instruction. It is these steps that Navy senior leaders believe have strengthened the local popularity of JROTC.[129]

Parents and school officials at host sites provide the most decisive support for program expansion, thus creating a demand for new programs. This support is attributable largely to the program's salutary effects on students and host institutions.

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125 John W. Corbett and Arthur T. Coumbe, JROTC: Recent Trends and Developments; Military Review; Fort Leavenworth; January/February 2001.

126 Ibid.

127 John W. Corbett, "The Demand for Junior Reserve Officers' Training Corps (JROTC) in American High Schools," and LTC John R. Hinson, SAMR, Army Junior Reserve Officers' Training Corps (JROTC), August 3, 1998.

128 John W. Corbett and Arthur T. Coumbe, JROTC: Recent Trends and Developments; Military Review; Fort Leavenworth; January/February 2001.

129 Catharine Lutz and Lesley Bartlett; Making Soldiers in the Public Schools: An Analysis of the Army JROTC Curriculum; Youth & Militarism Online, April 1995, [http://www.afsc.org/youthmil/jrotc/execfin.htm].

Principals indicate that having JROTC reduces disciplinary problems in their schools.[130] Key performance measures show that cadets attend class more frequently, are less likely to drop out of school, and are more likely to graduate than their peers.[131] According to Moskos, JROTC cadets have a 10- to 15-percent higher graduation rate than their peers in the same high school. Cadets also demonstrate slightly better academic performance than their counterparts in the general school population, including a grade point average of 2.8, compared with 2.6 for all students. Further, JROTC cadets achieve higher test scores, on average, on college admissions tests: 823 (combined Math and Verbal) versus 821 for all students on the SAT; and 20.5 on the ACT, compared with a score of 19 for all students.[132]

JROTC has long been touted by the military as a "youth leadership and development Program," not a recruiting tool. Nevertheless, it is difficult to deny that JROTC contributes positively to the military's recruiting effort. In fact, in testimony before the House Armed Services Committee on February 9, 2000, Secretary of Defense William Cohen referred to JROTC as "one of the best recruiting devices that we could have."[133] Growing numbers of military advocates in Congress agree, and some are even proposing a dramatic expansion of JROTC in the nation's schools to boost military enlistment rates. The armed services have proposed increasing the number of JROTC programs from 1600 to 3,500 by the year 2005.[134]

According to Department of Defense surveys, about 40 percent of high school seniors in JROTC plan to join the military after high school.[135] JROTC cadets who finish high school are much more likely--by five times--to sign up for the military right out of school than are non-cadets. Increasingly, JROTC is seen by military advocates as a cheaper and more productive recruiting tool than the regular recruitment and

130 Ibid.

131 Ibid.

132 COL John W Corbett, "The Demand for Junior Reserve Officers' Training Corps (JROTC) in American High Schools," USA, July 1998 Charles Moskos, "Bridging the Gap: Normative Considerations," pp. 40-41.

133 Harold Jordan, Recruiting Problems Escalate: The Latest in JROTC and Recruitment Fraud; Youth & Militarism Online, March 2000, [http://www.afsc.org/youthmil/html/news/mar00/recupdt.htm].

134 [http://www.usarotc.com/History/jhist08.htm], February 2003.

135 Ibid.

advertising programs. Meanwhile, JROTC officials state publicly that high enlistment rates by JROTC cadets are an "unintentional benefit" of the program for the armed forces.[136]

Although JROTC is not designed specifically as a military recruiting vehicle, DoD naturally has some interest in knowing how many JROTC graduates choose some form of military service. An important source of information is the self-reported data collected from students and then compiled into annual reports by each military service.[137]

Table 5.28 summarizes these reports for two consecutive school years. As seen here, a sizable proportion of cadets, approximately 40 percent in both years, indicated that they planned to join some form of military service. Because the survey is administered close to the time of high school graduation, the responses are believed to accurately portray enlistment rates.[138]

Given the significant recruitment and personnel retention costs that the U.S. armed forces currently face, this benefit cannot be overlooked. Moreover, given the number of students intending to serve, the total investment by DoD and the services in JROTC may seem relatively minor.

Table 3.7 is not a perfect measure of the overall benefits of JROTC to the students and to the country. Graduates who make up the large "Other" category include those who intend to go to college, find a job, or do anything other than serve in the military. And, although we may be able to infer that the great majority of these graduates intend to go to college, we cannot determine other values from the data, such as other forms of national service that JROTC graduates might undertake. Nevertheless, it is clear that the number of JROTC cadets is on the rise, increasing by approximately 31 percent between 1995 and 1997. It would seem difficult for DoD to ignore such numbers.

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136 Harold Jordan, Recruiting Problems Escalate: The Latest in JROTC and Recruitment Fraud, Youth & Militarism Online, March 2000, [http://www.afsc.org/youthmil/html/news/mar00/recupdt.htm].

137 Center for Strategic & International Studies (CSIS), Junior Reserve Officers' Training Corps Contributions to America's Communities: Final Report of The CSIS Political-Military Studies Project on the JROTC (CSIS May 1999).

138 Jerald G. Bachman, David R. Segal, Peter Freedman-Doan, and Patrick M. O'Malley, "Does Enlistment Propensity Predict Accessions?" Armed Forces & Society 25, No. 1 (Fall 1998): pp. 59-80.

Table 3.7. Self-Stated Plans of JROTC Graduates After High School, 1995-1996, 1996-1997.

PLANS	SY 1996-1997	SY 1995-1996
Total Graduates	30,630 (%)	23,349(%)
Attend College	13,685 (45)	15,132 (65)
Enlist in Active Military	(28)	(24)
Enlist in National Guard or Reserve	(4)	(7)
Seek Military Commission or College	(8)	(12)
Other	(60)	(57)

From: Center for Strategic & International Studies (CSIS), Junior Reserve Officers' Training Corps Contributions to America's Communities: Final Report of The CSIS Political-Military Studies Project on the JROTC (CSIS May 1999).

H. COMPARISON OF JROTC AND OTHER SUCCESSFUL YOUTH DEVELOPMENT PROGRAMS

1. Similarities

JROTC and other successful youth development programs are similar in many ways. First, JROTC is a national youth-serving organization. Like other programs, it holds a commitment to promoting social values and building various life skills, such as leadership, problem-solving and decision-making. Both JROTC and youth development programs rely on trained leaders to deliver their program. Specifically, for JROTC, these trained leaders come in the form of retired military personnel who teach young adults about the military. Both programs also involve hands-on education and cooperative learning.

Second, similarities between JROTC and other successful youth development programs extend to its goals. Although the stated goal may be slightly different, the end results are strikingly similar. Specifically, participation in JROTC may lead to improved academic performance, it provides an opportunity for youth to use their out-of-school time safely and productively, and JROTC students have the opportunity to develop positive relations with peers and adults. It has been argued that participation in JROTC keeps youth off the streets and out of trouble. At the same time, JROTC helps to develop a young person's character, confidence, citizenship, and connectedness. Additionally, like other successful youth development programs, JROTC does not require money, status, or negative labels. Quite the contrary, JROTC helps guide those who maybe

susceptible to, or already have, unacceptable habits and attitudes. JROTC also helps those who already have good character and behavior.

Because specific needs are influenced by current development (social, physical, and cognitive), individual characteristics and a broad set of background and contextual factors, the mission and curriculum of JROTC reflects its ability to meet the critical tasks required to help adolescents become productive and responsible citizens. Expanding the knowledge base and developing critical thinking and reasoning through cadet military exercises helps to develop youth cognitive abilities. Social development is enhanced through increased communication and negotiation with peers and adults. Physical fitness, decision-making ability, and the ability to apply values and beliefs in meaningful ways can be acquired by adolescents through JROTC and youth development programs.

Similarities between JROTC and youth development programs also extend to program effectiveness. Like youth development programs, JROTC is youth-centered (JROTC instructors and scheduled activities engage young cadets diverse talents, skills and interests, building strengths and involving decision-making), knowledge-centered (JROTC activities show youth that learning is a reason to be involved), and care-centered (JROTC cadets can feel safe and build trust in a family-like environment).

Finally, the key ingredients for success of youth development programs and JROTC are similar (comprehensive strategy with clear mission and goals; committed caring, professional leadership, and a positive focus including all youth). Both are comprehensive, flexible, intensive and responsive. Also, they both integrate home, school, community centers, the neighborhood, and the community. Funding for JROTC (supported by congressional appropriations) and public support (students, parents, teachers, and staff) are in line with those of other successful national youth-serving youth development programs.

2. Differences

Unlike some successful youth development programs where participation can be influenced by income, gender, race, and access, JROTC is open to everyone. As mentioned earlier, money, status, or labels are not required for youth to participate in JROTC. However, the greatest and most unique difference between JROTC and other

successful youth development programs is its military focus. Also, students who spend 2-3 years in JROTC are rewarded with advanced promotion if they seek enlistment in a military service upon high school graduation.

I. CHAPTER SUMMARY

JROTC expansion has placed JROTC units in areas where they were previously most underrepresented--the northern plains, the populous northeast and New England. Today, JROTC is still underrepresented in large cities. However, with expansion came a change in the composition of JROTC enrollees. Expansion also brought increased female enrollment, increased black and Hispanic enrollment and a relatively low and declining white enrollment.

Each military has its own way of developing and overseeing its JROTC program. Despite differences in size and curriculum, there is a common thread that flows through the JROTC program of each military service: each military services' mission generally includes the promoting citizenship, developing leadership, strengthening self-esteem, improving physical fitness, and instilling responsibility, character and self-discipline.

JROTC expansion has also helped to establish career academies because 1) it is part of the JROTC expansion to cultivate a more positive public image for the military and 2) they have been found to be effective in improving students' academic performance. Career academy attendance results in higher grades, better attendance, and higher student satisfaction. However, DoD funding for JROTC cadets has declined; partly due to the widening gap between the JROTC mission and its resources.

Despite financial controversy, research shows that JROTC cadets do better than their peers in several areas. The JROTC program of instruction in citizenship, leadership, communications, and physical fitness have produced undeniable positive results. Students who participate in JROTC are in class more, more likely to graduate, and are infused with democratic values. Furthermore, JROTC has a positive effect on student behavior that is centered around the fact that students volunteer to be in JROTC. Parents and teachers agree that students are better by participating in JROTC.

Because of its military focus, it is difficult to deny that JROTC contributes to the military recruiting effort. More importantly, with JROTC cadets enlisting five times

more than non-JROTC cadets, and receiving a promotion upon enlistment, high enlistment rates by JROTC cadets is an unintentional benefit. Although not specifically considered a recruiting tool, reports indicate some 40 percent of JROTC cadets planned to join some form of military service.

IV. JROTC GRADUATES AND MILITARY RECRUITING

Although DoD often avoids describing JROTC as a recruiting tool, some 40 percent of cadets stated that they plan to join the military. This chapter explores the role of JROTC in military recruiting by looking at the quantity and demographic characteristics of JROTC graduates who enlist in the armed forces. In addition, a common measure of military performance, first-term attrition, is examined and compared for recruits who have participated in JROTC and all recruits over a twelve-year period.

A. JROTC DATA

The data presented in this section were provided by the Defense Manpower Data Center (DMDC) located in Monterey, California. The data consist of cohort accession files of DoD recruits who entered active duty during each fiscal year (a "cohort"), from 1990 through 2001. These recruits are then tracked longitudinally through service records as of September 2002. The cohort accession file contains the records of 2,270,089 recruits who entered the military during this twelve-year period. These records also include the Inter-service Separation Codes (ISCs) that show why recruits were discharged, if applicable, from the military. Of the 2,270,089 recruits who joined the military's enlisted force during this twelve-year period, 85,120 (3.7 percent) were recruits who participated in JROTC. The following discussion summarizes major findings from analyzing DoD data on recruits who participated in JROTC. The analysis focuses primarily on general descriptive data and on first-term attrition, or the discharge rates of recruits who fail to complete their first term of service.

1. Military Enlistment by JROTC Graduates Increased in the 1990s

Table 4.1 shows the total number and percentage of JROTC participants who enlisted in the military and all recruits within DoD by their fiscal year of entry. As seen here, the number and proportion of JROTC participants increased during the 1990s. The number of JROTC participants reached a twelve-year high in 1998 at 8,415. Likewise, the proportion of JROTC participants also steadily increased during the 1990s, rising from 2.9 percent in 1990 to a high of 4.6 percent in 1998.

Table 4.1. Number and Percentage of JROTC Participants Who Enlisted in the Military and All Recruits by Fiscal Year of Entry, 1990-2001.

FISCAL YEAR OF ENTRY	NUMBER		JROTC % OF ALL RECRUITS
	JROTC	ALL RECRUITS	
1990	6,488	223,401	2.9
1991	6,072	204,882	2.9
1992	7,092	201,565	3.5
1993	6,813	202,909	3.3
1994	6,431	176,409	3.6
1995	6,763	167,287	4.0
1996	7,427	179,133	4.1
1997	8,260	188,895	4.3
1998	8,415	180,031	4.6
1999	7,691	183,768	4.2
2000	7,079	178,833	4.0
2001	6,589	182,976	3.6
TOTAL	85,120	2,270,089	3.7

From: Derived from data provided by the Defense Manpower Data Center, January 2003.

It is interesting to observe that, although the number of JROTC participants has continued to increase, the total number of recruits actually declined from 1990 to 1995 and remained relatively low throughout the rest of this twelve-year period. Table 4.2 shows the number of JROTC participants who enlisted in the military and all recruits by service. When looking at the number of JROTC participants with respect to the different services, it can be seen that the Army has the largest number of JROTC participants and the largest number of all recruits. The Marine Corps has the next largest number of JROTC recruits, followed by the Navy and the Air Force.

Table 4.2. Number of JROTC Participants Who Enlisted in the Military and All Recruits by Service and Fiscal Year of Entry, 1990-2001.

FISCAL YEAR OF ENTRY	ARMY		NAVY		USMC		USAF	
	JROTC	ALL RECRUITS	JROTC	ALL RECRUITS	JROTC	ALL RECRUITS	JROTC	ALL RECRUITS
1990	3,080	84,351	1,370	62,510	955	32,888	895	35,709
1991	2,810	77,073	1,416	68,424	1,040	29,630	806	29,755
1992	3,140	76,546	1,541	58,440	1,389	31,764	1,022	4,815
1993	2,579	73,789	1,822	63,116	1,527	34,722	885	31,282
1994	2,238	61,401	1,584	53,496	1,661	31,756	948	29,756
1995	2,411	57,401	1,468	48,152	1,986	31,946	898	30,788
1996	3,395	69,910	1,376	46,144	1,987	32,531	689	30,548
1997	3,878	75,727	1,476	49,131	2,186	33,949	720	30,088
1998	3,961	68,321	1,356	46,726	2,236	33,450	862	31,534
1999	3,476	67,007	1,286	51,436	2,206	32,998	723	32,327
2000	3,270	66,399	1,152	49,338	1,978	30,232	679	32,864
2001	2,897	69,109	1,072	49,870	1,962	30,147	658	33,850
TOTAL	37,135	847,034	16,919	646,783	21,113	386,013	9,785	353,,316

From: Derived from data provided by the Defense Manpower Data Center, January 2003.

As seen in Table 4.3, the Marine Corps has the largest percentage of JROTC participants of the four services during this twelve-year period. The Army, Navy and Air Force follow, in that order. From 1992 through 2001, on average, 6.4 percent of Marine Corps recruits had participated in JROTC. The Navy and Air Force JROTC recruits had less than half of the proportion found joining the Marine Corps.

Table 4.3. Percentage of New Recruits Who Are JROTC Participants by Service and Fiscal Year of Entry, 1990-2001.

FISCAL YEAR OF ENTRY	ARMY	NAVY	USMC	USAF	ALL SERVICES
1990	3.7	2.2	3.0	2.5	2.9
1991	3.6	2.7	3.5	2.7	2.9
1992	4.1	2.6	4.3	2.1	3.5
1993	3.5	2.9	4.3	2.7	3.3
1994	3.6	3.0	5.2	3.2	3.6
1995	4.2	3.0	6.2	3.0	4.0
1996	4.9	3.0	6.1	2.3	4.1
1997	5.1	3.0	6.4	2.4	4.3
1998	5.8	3.0	6.7	2.7	4.6
1999	5.2	2.5	6.7	3.2	4.2
2000	4.9	2.3	6.5	2.1	4.0
2001	4.1	2.1	6.5	2.0	3.6
TOTAL	4.5	2.7	5.5	2.6	3.7

From: Derived from data provided by the Defense Manpower Data Center, January 2003.

Table 4.4 shows the number of JROTC participants who enlisted in the military and all recruits from 1990 through 2001 by gender. As seen here, the vast majority of JROTC recruits are men (about four out of five), reflecting the gender composition of all military recruits. However, unlike male JROTC participants, the number of female JROTC participants consistently increased from 1993 through 1998. And, as seen in Table 4.5, from 1996 through 1999, and again in 2001, the percentage of female JROTC participants was higher than the rate for male JROTC participants. The proportion of female JROTC participants peaked in 1998, when 5 percent of all recruits had been in the program.

Table 4.4. Number of JROTC Participants Who Enlisted in the Military and All Recruits by Gender and Fiscal Year of Entry, 1990-2001.

FISCAL YEAR OF ENTRY	MALE		FEMALE		TOTAL	
	JROTC	ALL RECRUITS	JROTC	ALL RECRUITS	JROTC	ALL RECRUITS
1990	5,667	193,847	821	29,554	6,488	223,401
1991	5,304	179,237	768	25,645	6,072	204,882
1992	6,070	171,795	1,022	29,770	7,092	201,565
1993	5,813	174,556	1,000	28,353	6,813	202,909
1994	5,410	147,447	1,021	28,962	6,431	176,409
1995	5,624	137,842	1,139	29,445	6,763	167,287
1996	6,080	148,007	1,347	31,126	7,427	179,133
1997	6,701	155,827	1,559	33,068	8,260	188,895
1998	6,780	147,489	1,635	32,542	8,415	180,031
1999	6,114	150,256	1,577	33,512	7,691	183,768
2000	5,529	114,214	1,550	33,619	7,079	178,833
2001	5,170	149,323	1,419	33,653	6,589	182,976
TOTAL	70,262	1,869,840	14,816	369,249	85,120	2,270,089

From: Derived from data provided by the Defense Manpower Data Center, January 2003.

Table 4.5. Percentage of New Recruits Who Are JROTC Participants by Gender and Fiscal Year of Entry, 1990-2001.

FISCAL YEAR OF ENTRY	MALE	FEMALE	TOTAL
1990	3.0	2.8	2.9
1991	3.0	3.0	2.9
1992	3.5	3.4	3.5
1993	3.3	3.5	3.3
1994	3.7	3.5	3.6
1995	4.1	3.9	4.0
1996	4.1	4.3	4.1
1997	4.3	4.7	4.3
1998	4.0	5.0	4.6
1999	4.1	4.7	4.2
2000	4.8	4.6	4.0
2001	3.5	4.2	3.6
TOTAL	3.8	4.0	3.7

From: Derived from data provided by the Defense Manpower Data Center, January 2003.

Table 4.6 shows the number of JROTC participants who enlisted in the military and all recruits by race/ethnicity. Generally, the numbers of recruits with JROTC experience increased for all racial/ethnic groups during the mid-1990s, though patterns vary somewhat. The number of white JROTC participants rose steadily from 1990 to 1992 and from 1994 to 1998. The number of black JROTC participants increased

between 1994 to 1997. The number of Hispanic JROTC participants climbed from 1990 to 1993, fell in 1994, and then increased again from 1994 to 1996, reflecting the rising number of Hispanic recruits. The number of "Other" JROTC participants peaked at 428 in 1998, up from 179 in 1990.

Table 4.7 shows the percentage of new recruits who are JROTC participants by race/ethnicity. Here, blacks consistently had the highest percentage of JROTC participants during this twelve-year period, as much as 3 to 5 percentage points higher than the rates for other racial/ethnic groups. In 1990, the percentage of JROTC participants who were black was 5.7 percent, rising to over 8 percent in 1998. On the other hand, whites generally had the lowest percentage of JROTC participants during this twelve-year period, averaging 3 percent between 1990-2001, and never rising above 3.8 percent (1998). Clearly, the rates for black JROTC participants stand well above the rates for other groups, which tend to stay below 4 percent (with the exception of Hispanics in 1998, 1999, and 2001).

Table 4.6. Number of JROTC Participants Who Enlisted in the Military and All Recruits by Race/Ethnicity and Fiscal Year of Entry, 1990-2001.

RACE/ ETHNICITY	**FISCAL YEAR OF ENTRY**											
	1990	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**
WHITE												
JROTC	3,226	3,305	3,795	3,625	3,513	3,693	3,913	4,291	4,340	3,893	3,623	3,354
ALL RECRUITS	154,675	149,496	146,019	146,569	124,592	114,038	118,400	121,644	114,477	115,469	111,782	115,448
BLACK												
JROTC	2,648	2,114	2,571	2,436	2,196	2,270	2,638	2,944	2,853	2585	2,361	2,051
ALL RECRUITS	46,098	33,708	33,409	33,782	31,565	30,776	34,287	37,565	35,334	36,499	35,744	35,694
HISPANIC												
JROTC	435	471	527	567	488	534	597	547	794	833	756	844
ALL RECRUITS	15,518	14,853	15,294	15,325	13,547	15,080	17,564	18,453	18,749	19,821	20,012	20,688
OTHER												
JROTC	179	182	199	185	234	266	279	360	428	380	399	340
ALL RECRUITS	7,110	6,825	6,843	7,233	6,705	7,393	8,882	11,223	11,471	11,979	11,295	11,166
TOTAL												
JROTC	6,488	6,072	7,092	6,813	6,431	6,763	7,427	8,260	8,415	7,691	7,079	6,589
ALL RECRUITS	223,401	204,882	201,565	202,909	176,409	167,287	179,133	188,895	180,031	183,768	178,833	182,976

From: Derived from data provided by the Defense Manpower Data Center, January 2003.

Table 4.7. Percentage of New Recruits Who Are JROTC Participants by Race/Ethnicity and Fiscal Year of Entry, 1990-2001.

FISCAL YEAR OF ENTRY	RACE/ETHNICITY				
	WHITE	BLACK	HISPANIC	OTHER	TOTAL
1990	2.1	5.7	2.8	2.5	2.9
1991	2.2	6.3	3.2	2.7	3.0
1992	2.6	7.7	3.4	3.0	3.5
1993	2.5	7.2	3.7	2.6	3.4
1994	2.8	7.0	3.6	3.5	3.6
1995	3.2	7.3	3.5	3.6	4.0
1996	3.3	7.7	3.4	3.1	4.1
1997	3.5	7.8	3.0	3.2	4.4
1998	3.8	8.1	4.2	3.7	4.7
1999	3.4	7.1	4.2	3.2	4.2
2000	3.2	6.6	3.8	3.5	4.0
2001	3.0	5.7	4.1	3.0	3.6
TOTAL	3.0	7.0	3.6	3.1	3.8

From: Derived from data provided by the Defense Manpower Data Center, January 2003.

All applicants for enlistment are required to take the Armed Services Vocational Aptitude Battery (ASVAB). A combination of scores from subtests on the ASVAB is used to calculate an applicant's score on the Armed Forces Qualification Test (AFQT). Scores on the AFQT are divided into categories for reporting purposes, with Categories I through III-A showing scores above the 50th percentile (the estimated mean for the age-eligible national population). AFQT Category III-B includes scores below the population average, from the 31st to 49th percentiles. AFQT Category IV includes scores in the lowest acceptable range, between the 10th and 30th percentiles.

Table 4.8 shows the number of JROTC participants and all recruits by AFQT Category (I-III-A, III-B, and IV) and fiscal year of entry. As seen here, the distribution of JROTC participants reflects that of all recruits, with most falling in AFQT Categories I-III-A, followed by Category III-B, and a much smaller number in Category IV. At the same time, proportionately higher numbers of JROTC participants can be found in Category III-B than in the other two categories, as seen in Table 4.9.

In fact, for every year except one (2001), the percentage of recruits who participated in JROTC is highest in Category III-B. Further, for eight of the twelve years shown in Table 4.9, the percentage of JROTC recruits in Category IV is higher than the

rate for those in Categories I-III-A, especially between 1997 and 2001, when the proportion of Category IV recruits was at least 5 percent in four out of five years. In comparison with all recruits, then, JROTC participants are more heavily concentrated in AFQT Categories that include scores below the 50th percentile.

Table 4.8. Number of JROTC Participants Who Enlisted in the Military and All Recruits by Armed Forces Qualification Test (AFQT) Category and Fiscal Year of Entry, 1990-2001.

AFQT CATEGORY							
FISCAL YEAR OF ENTRY	**I-III-A**		**III-B**		**IV**		**TOTAL**
	JROTC	**ALL RECRUITS**	**JROTC**	**ALL RECRUITS**	**JROTC**	**ALL RECRUITS**	
1990	3,980	151,878	2,275	63,267	223	8,256	223,401
1991	4,174	147,680	1,831	54,360	67	2,842	204,882
1992	5,019	150,879	2,038	40,439	35	1,247	201,565
1993	4,465	144,248	2,258	56,178	90	2,483	202,909
1994	4,274	124,610	2,087	49,892	70	1,907	176,409
1995	4,345	117,214	2,353	48,099	65	1,974	167,287
1996	4,458	122,751	2,869	53,782	100	2,600	179,133
1997	4,991	129,051	3,134	57,180	135	2,664	188,895
1998	5,033	121,560	3,246	55,928	136	2,543	180,031
1999	4,408	119,579	3,103	60,566	180	3,623	183,768
2000	4,037	117,649	2,955	59,201	67	1,983	178,833
2001	3,879	120,545	2,603	60,250	107	2,181	182,976
TOTAL	53,063	1,567,644	30,752	659,142	1,275	34,303	2,270,089

From: Derived from data provided by the Defense Manpower Data Center, January 2003.

Table 4.9. Percentage of New Recruits Who Are JROTC Participants by Armed Forces Qualification Test (AFQT) Category and Fiscal Year of Entry, 1990-2001.

FISCAL YEAR OF ENTRY	**AFQT CATEGORY**			**ALL AFQT CATEGORIES**
	I-III-A	**III-B**	**IV**	
1990	2.6	3.6	2.7	3.0
1991	2.8	3.4	2.3	2.8
1992	3.3	5.0	2.8	3.7
1993	3.1	4.0	3.6	3.6
1994	3.4	4.2	3.7	3.8
1995	3.7	4.9	3.3	4.0
1996	3.6	5.3	3.8	4.2
1997	3.9	5.5	5.1	4.8
1998	4.1	5.8	5.3	5.0
1999	3.7	5.1	5.0	4.6
2000	3.4	5.0	3.4	3.9
2001	3.2	4.3	5.0	4.2
TOTAL	2.9	3.9	3.1	3.9

From: Derived from data provided by the Defense Manpower Data Center, January 2003.

2. First-Term Attrition is Consistently Lower for JROTC Participants

One way of assessing the military performance of service members is by determining whether they are able to complete a first term of enlistment. Historically, since 1973, approximately, one-third of every group of new recruits who entered the military in a given year has failed to finish a first term of service. This phenomenon is called "first-term attrition," and DoD has devoted much time, energy, and money to reducing both its effects and incidence.

In the present study, first-term attrition is used as one measure for comparing the military performance of JROTC participants with that of all recruits. Since the length of a contracted enlistment may vary from service to service and from program to program within a service, a common point of 36 months was selected as a standard for length of service. Thus, the attrition rate used in the present study is calculated as the proportion of each group of recruits (by year of entry) who were discharged from the military during the first 36 months (3 years) for any reason other than expiration of term of enlistment. (Expiration of term of enlistment would indicate that the service member had successfully completed the enlistment on schedule.) For example, applying this methodology, the attrition rate for recruits entering the military in fiscal year 1990 is calculated as of September 30, 1993. For recruits entering the military in fiscal year 2000 or 2001, length of service is determined as of September 30, 2002 (the two-year point for recruits who entered in 2000, and the one-year point for those who entered in 2001).

Table 4.10 compares the first-term attrition rates of JROTC participants and all recruits by fiscal year of entry. The attrition rates of JROTC participants are lower than those of all recruits for every year of entry in the twelve-year period.

Table 4.10. First-Term (36 Months) Attrition Rates of JROTC Participants and All Recruits by Fiscal Year of Entry, 1990-2001.

FISCAL YEAR OF ENTRY	JROTC	ALL RECRUITS
1990	27.5	30.4
1991	28.7	29.9
1992	28.2	29.3
1993	30.2	32.0
1994	31.8	33.0
1995	32.6	32.8
1996	30.8	21.2
1997	29.9	31.0
1998	30.4	31.0
1999	27.6	30.3
2000	23.0	24.9
2001	15.2	18.1

From: Derived from data provided by the Defense Manpower Data Center, January 2003.

As seen in Table 4.11, which shows the 36-month attrition rates, by service, for former JROTC participants and all recruits, the attrition rates for recruits who participated in JROTC are generally lower than those of all recruits. In the Army, JROTC rates are lower in all but one year (1995); in the Navy JROTC rates are below those of all recruits in every year; and in the Marine Corps and the Air Force, JROTC attrition rates are lower in seven and nine of the twelve years, respectively. The difference in rates tend to be small, but they clearly favor JROTC participants.

Table 4.11. First-Term (36 Months) Attrition Rates of JROTC Participants and All Recruits by Service and Fiscal Year of Entry, 1990-2001.

FISCAL YEAR OF ENTRY	ARMY		NAVY		USMC		USAF	
	JROTC	ALL RECRUITS	JROTC	ALL RECRUITS	JROTC	ALL RECRUITS	JROTC	ALL RECRUITS
1990	28.8	32.1	25.0	30.0	30.4	33.1	23.9	25.6
1991	29.7	33.0	26.8	28.1	31.5	30.9	24.8	25.2
1992	30.8	31.8	26.9	29.9	29.3	29.0	20.6	22.7
1993	32.9	34.6	31.3	33.4	27.3	29.4	24.8	25.6
1994	35.2	35.6	33.3	35.3	27.3	30.2	28.1	26.1
1995	33.6	33.3	35.2	36.4	32.3	31.5	26.3	27.4
1996	31.8	33.1	32.4	34.1	28.6	28.1	29.3	25.9
1997	29.8	32.1	33.5	34.0	29.0	29.4	26.3	25.5
1998	34.4	35.5	25.7	30.8	29.0	28.1	22.4	24.6
1999	29.8	33.5	29.5	32.7	25.9	25.9	18.5	24.3
2000	25.0	26.9	23.0	27.1	22.0	23.4	16.8	18.8
2001	16.9	21.0	14.4	19.2	15.5	18.5	8.2	10.0

From: Derived from data provided by the Defense Manpower Data Center, January 2003.

Table 4.12 shows the percentage-point differences between the attrition rates of JROTC participants and all recruits by service. In looking at service comparisons, not only does Navy JROTC participants have attrition rates that are consistently lower than those of all recruits, but this difference is as high as 5 percentage points in 1990 and 1998. Also, although Marine Corps and Air Force JROTC participants have higher attrition rates than those of all recruits in certain entry years, differences that favor JROTC are usually higher than differences that favor all recruits.

Table 4.12. First-Term (36 Months) Attrition Rates: Difference Between JROTC Participants and All Recruits by Service, 1990-2001.

FISCAL YEAR OF ENTRY	ARMY	NAVY	USMC	USAF
1990	3.3	5.0	2.7	1.7
1991	3.3	1.3	-0.6	0.4
1992	1.0	3.0	-0.3	2.1
1993	1.7	2.1	2.1	0.8
1994	0.4	2.0	2.9	-2.0
1995	0.3	1.2	-0.8	1.1
1996	1.3	1.7	-0.5	-3.4
1997	2.3	0.5	0.4	-0.8
1998	1.1	5.1	-0.9	2.2
1999	3.7	3.2	0.0	5.8
2000	1.9	4.1	1.4	2.0
2001	4.1	4.8	3.0	1.8

From: Derived from data provided by the Defense Manpower Data Center, January 2003.

Table 4.13 shows the first-term attrition rates for JROTC participants and all recruits by gender, and Table 4.14 shows the first-term attrition rate differences for JROTC participants and all recruits by gender. As seen here, male JROTC participants have an attrition rate that is lower than that of all male recruits in each of the twelve entry years. The largest difference is found in 1999, at 3.4 percentage points. In 1995 and 1998, female JROTC attrition rates were slightly higher than those all female recruits; otherwise, the rates for female JROTC participants are lower than those of all female recruits.

Table 4.13. First-Term Attrition (36 Months) Rates of JROTC Participants and All Recruits by Gender and Fiscal Year of Entry, 1990-2001.

FISCAL YEAR OF ENTRY	MALE		FEMALE		TOTAL	
	JROTC	ALL RECRUITS	JROTC	ALL RECRUITS	JROTC	ALL RECRUITS
1990	26.8	29.3	31.8	38.0	27.5	30.4
1991	27.4	28.6	37.4	39.3	28.7	29.9
1992	27.1	27.8	34.6	37.5	28.2	29.3
1993	29.3	30.7	35.0	39.6	30.2	31.9
1994	30.6	31.8	37.9	38.7	31.8	32.9
1995	31.4	31.5	38.7	38.4	32.6	32.8
1996	29.6	29.8	36.2	37.8	30.8	21.2
1997	28.7	29.6	35.2	37.9	29.9	31.0
1998	27.9	29.1	40.6	39.5	30.4	31.0
1999	25.3	28.7	36.3	37.3	27.6	30.3
2000	20.9	23.5	30.5	30.6	23.0	24.9
2001	14.1	17.0	19.4	22.8	15.2	18.1

From: Derived from data provided by the Defense Manpower Data Center, January 2003.

Table 4.14. First-Term Attrition (36 Months) Rates: Difference Between JROTC Participants and All Recruits by Gender and Fiscal Year of Entry, 1990-2001.

FISCAL YEAR OF ENTRY	MALE	FEMALE	TOTAL
1990	2.5	6.2	2.9
1991	1.2	1.9	1.2
1992	0.7	2.9	1.1
1993	1.4	4.6	1.7
1994	1.2	0.8	1.1
1995	0.1	0.3	0.2
1996	0.2	1.6	-9.6
1997	0.9	2.7	1.1
1998	1.2	-1.1	0.6
1999	3.4	1.0	2.7
2000	2.6	0.1	1.9
2001	2.9	3.4	2.9

From: Derived from data provided by the Defense Manpower Data Center, January 2003.

3. First-Term Attrition is Comparatively Lower for JROTC Participants Who Are Minorities Than for Those Who Are White

Table 4.15 shows the first-term attrition rates of JROTC participants and all recruits by race/ethnicity and year of entry. Once again, attrition rates are consistently lower for JROTC participants in each racial/ethnic group. However, the attrition rates for whites are slightly higher than those for all white recruits in 1991, 1993, 1995, and 1996. Surprisingly, not only are the first-term attrition rates for Hispanic JROTC participants

consistently lower than those of all recruits during each year of the twelve-year period, but they are also among the lowest of all racial/ethnic groups, with differences as high as 8 to 12 percentage points. JROTC participants in the "Other" category also have relatively low first-term attrition rates, consistently lower than those of blacks and whites, and with differences ranging from 3 to 15 percentage points.

In looking at the first-term attrition rate differences among racial/ethnic groups, Table 4.16 shows that the first-term attrition rates of blacks who participated in JROTC are consistently lower than those of all black recruits – especially in 1990 and 1993, when differences favor black JROTC participants by 4 percentage points. The first-term attrition rate of Hispanic JROTC participants is also 4 percentage points lower than that of all Hispanic recruits in 1993. At the same, the first-term attrition rates of "Other" JROTC participants are lower than those of all "Other" recruits by as many as 9 percentage points, reaching 8.7 percentage points in 1991.

Table 4.15. First-Term Attrition (36 Months) Rates of JROTC Participants and All Recruits by Race/Ethnicity and Fiscal Year of Entry, 1990-2001.

RACE/ ETHNICITY	**FISCAL YEAR OF ENTRY**											
	1990	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**
WHITE												
JROTC	30.2	31.2	29.2	33.2	34.0	34.3	32.7	31.7	32.3	30.0	25.6	17.1
ALL RECRUITS	31.5	30.7	29.9	32.8	34.0	33.8	32.5	32.5	32.7	32.1	26.6	19.4
BLACK												
JROTC	25.2	27.1	28.0	28.5	31.2	32.7	30.5	29.8	30.0	27.4	22.2	14.1
ALL RECRUITS	29.4	29.8	29.7	32.5	33.6	33.4	31.7	31.4	31.1	29.9	24.6	16.9
HISPANIC												
JROTC	23.0	23.4	22.2	21.0	23.8	23.8	24.5	22.0	23.8	20.2	15.0	12.1
ALL RECRUITS	25.9	25.3	24.7	24.9	25.7	26.7	25.2	24.2	24.2	23.3	18.7	13.9
OTHER												
JROTC	23.0	15.4	26.1	20.6	21.0	25.2	21.2	24.7	25.5	20.3	19.2	10.6
ALL RECRUITS	25.3	24.1	23.1	25.9	24.6	26.4	24.6	25.5	24.6	25.5	19.8	15.4
TOTAL												
JROTC	27.6	28.6	28.2	30.2	31.8	32.6	30.8	29.9	30.4	27.6	23.0	15.2
ALL RECRUITS	30.4	29.9	29.3	31.9	32.9	32.8	31.2	31.0	31.0	30.3	24.9	18.1

From: Derived from data provided by the Defense Manpower Data Center, January 2003.

Table 4.16. First-Term (36 Months) Attrition Rates: Difference Between JROTC Participants and All Recruits by Race/Ethnicity and Fiscal Year of Entry, 1990-2001.

FISCAL YEAR OF ENTRY	RACE				
	WHITE	BLACK	HISPANIC	OTHER	TOTAL
1990	1.3	4.2	2.9	2.3	2.8
1991	-0.5	2.7	1.9	8.7	1.3
1992	0.7	1.7	2.5	-3.0	1.1
1993	-0.4	4.0	3.9	5.3	1.7
1994	0.0	2.4	1.9	3.6	1.1
1995	-0.5	0.7	2.9	1.2	-0.2
1996	-0.2	1.2	0.7	3.4	0.4
1997	0.8	1.6	2.2	0.8	1.1
1998	0.4	1.1	0.4	-0.9	0.6
1999	2.1	2.5	3.1	5.2	2.7
2000	1.0	2.4	3.7	0.6	1.9
2001	2.3	2.8	1.8	4.8	2.9

From: Derived from data provided by the Defense Manpower Data Center, January 2003.

4. First-Term Attrition is Lower for JROTC Participants in Higher AFQT Categories; But Differences Between JROTC Participants and All Recruits Are Greatest in Lower AFQT Categories

The first-term attrition rates of JROTC participants and all recruits by AFQT category are shown in Table 4.17. As seen here, the attrition rate for JROTC participants in each of the AFQT category groupings are consistently lower than the rate for recruits in these categories. The percentage point difference between the attrition rates are displayed in Table 4.18. As seen here, the differences between the rates of JROTC participants and those of all recruits are greatest in the lower AFQT categories, III-B and IV. In fact, the very largest differences – over 8 percentage points in two years – occur in Category IV.

Table 4.17. First-Term Attrition (36 Months) Rates of JROTC Participants and All Recruits by Armed Forces Qualification Test (AFQT) Category and Fiscal Year of Entry, 1990-2001.

AFQT CATEGORY							
FISCAL YEAR OF ENTRY	**I-III-A**		**III-B**		**IV**		**TOTAL**
	JROTC	**ALL RECRUITS**	**JROTC**	**ALL RECRUITS**	**JROTC**	**ALL RECRUITS**	
1990	26.5	29.1	29.5	33.6	23.6	32.0	223,401
1991	27.9	28.6	30.3	33.6	32.8	25.2	204,882
1992	26.5	27.8	32.3	33.8	20.0	24.7	201,565
1993	28.5	30.1	33.2	36.5	34.5	34.8	202,909
1994	30.7	31.1	34.1	37.3	30.0	38.3	176,409
1995	30.8	31.2	36.1	36.7	24.6	30.4	167,287
1996	30.1	29.9	31.8	34.5	34.0	27.9	179,133
1997	29.2	30.1	31.2	33.2	29.6	29.6	188,895
1998	29.7	29.9	31.2	33.1	34.6	33.1	180,031
1999	27.3	29.1	27.7	32.7	32.8	27.8	183,768
2000	22.0	23.8	24.3	27.0	26.4	25.4	178,833
2001	14.8	17.1	15.5	19.9	19.6	20.6	182,976

From: Derived from data provided by the Defense Manpower Data Center, January 2003.

Table 4.18. First-Term (36 Months) Attrition Rates: Difference Between JROTC Participants and All Recruits by Armed Forces Qualification Test (AFQT) Category and Fiscal Year of Entry, 1990-2001.

FISCAL YEAR OF ENTRY	**I-III-A**	**III-B**	**IV**	**ALL AFQT CATEGORIES**
1990	2.6	4.1	8.4	5.0
1991	0.7	3.3	7.6	3.9
1992	1.3	1.5	4.7	2.5
1993	1.6	3.3	0.3	1.7
1994	0.4	3.2	8.3	4.0
1995	0.4	0.6	5.8	2.3
1996	+0.2	2.7	6.1	2.9
1997	0.9	2.0	0.0	1.0
1998	0.2	1.9	1.5	1.2
1999	1.8	5.0	5.0	3.9
2000	1.8	2.7	1.0	1.8
2001	2.3	4.4	1.0	2.6

From: Derived from data provided by the Defense Manpower Data Center, January 2003.

5. Compared With All Recruits, JROTC Participants Are Concentrated Among Minorities and in AFQT Category III-B, Exhibiting Lower First-Term Attrition

As previously observed (Table 4.7), the proportions of new recruits who are JROTC participants are highest among minorities and among recruits in AFQT Category III-B. In looking at the first-term attrition of JROTC participants and all recruits by

race/ethnicity in AFQT Category III-B, Table 4.19 shows that the rates are consistently lower for JROTC participants over most years of the twelve-year period. A few notable exceptions are found: attrition rates for JROTC participants are slightly higher for Hispanics in 1991 and 1998 and for those in the "Other" racial/ethnic group in 1992, 1993, 1995, and in 1998.

It is interesting to observe here that the attrition rates are generally lower for minorities than for whites. This holds true for JROTC participants as well as for all recruits. Among JROTC recruits who are minorities and in AFQT Category III-B, Hispanics tend to have the lowest attrition rates, by as much as 10 percentage points in 1992. Table 4.19 also shows that JROTC participants in the "Other" category have first-term attrition rates that are as much as 4 to 16 percentage points lower than those of all other racial/ethnic groups.

Table 4.19. First-Term (36 Months) Attrition Rates of JROTC Participants and All Recruits in Armed Forces Qualification Test (AFQT) Category III-B, by Race/Ethnicity and Fiscal Year of Entry, 1990-2001.

RACE/ ETHNICITY	**FISCAL YEAR OF ENTRY**											
	1990	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**
WHITE												
JROTC	36.7	37.2	38.2	42.5	41.9	41.0	36.0	36.0	36.0	32.1	28.1	20.0
ALL RECRUITS	36.7	36.1	36.6	39.6	41.2	40.4	38.7	37.0	38.0	38.0	31.1	23.4
BLACK												
JROTC	26.3	27.0	29.5	29.5	31.2	34.7	31.5	30.0	29.9	27.2	23.8	14.0
ALL RECRUITS	31.0	32.0	31.9	34.9	35.7	35.2	33.2	32.5	31.8	31.0	26.0	17.8
HISPANIC												
JROTC	24.0	27.0	24.7	21.0	24.9	25.9	22.8	21.6	24.9	21.2	18.5	10.2
ALL RECRUITS	26.1	26.3	26.6	27.3	27.1	28.2	26.0	25.1	24.6	23.9	19.6	14.3
OTHER												
JROTC	27.1	11.6	34.6	28.0	21.3	32.6	19.6	23.5	26.0	14.4	18.8	13.4
ALL RECRUITS	29.7	25.9	26.7	27.5	27.9	27.6	25.3	25.2	24.1	23.8	19.4	16.5
TOTAL												
JROTC	29.5	30.3	32.3	33.2	34.1	36.1	31.8	31.2	31.2	27.7	24.3	15.5
ALL RECRUITS	31.8	33.6	33.8	36.5	37.3	36.7	34.5	33.2	33.1	32.7	27.0	19.9

From: Derived from data provided by the Defense Manpower Data Center, January 2003.

The difference between the first-term attrition rates of JROTC participants and all recruits by AFQT Category III-B are highlighted in Table 4.20. As seen here, the

attrition rates for JROTC participants in Category III-B are consistently lower than the rates for all recruits in these categories. The differences between the rates of JROTC participants and those of all recruits are greatest in the Hispanic and "Other" category. The largest difference – over 14 percentage points – occurs for "Other" recruits in 1991.

Table 4.20. First-Term (36 Months) Attrition Rates: Difference Between JROTC Participants and All Recruits by Armed Forces Qualification Test (AFQT) Category III-B, Race/Ethnicity and Fiscal Year of Entry, 1990-2001.

FISCAL YEAR OF ENTRY	AFQT CATEGORY III-B				
	RACE				
	WHITE	BLACK	HISPANIC	OTHER	TOTAL
1990	0.0	4.7	2.1	2.6	1.3
1991	-1.1	5.0	-0.7	14.3	3.3
1992	-1.6	2.4	1.9	-7.9	1.5
1993	-2.9	5.4	6.3	-0.5	3.3
1994	-0.7	4.5	2.2	6.6	3.2
1995	-0.6	0.5	2.3	-5.0	0.6
1996	2.7	1.7	3.2	5.7	2.7
1997	1.0	2.5	3.5	1.7	2.0
1998	2.0	1.9	-0.3	1.9	1.9
1999	6.9	3.8	2.7	9.4	5.0
2000	3.0	2.2	1.1	0.6	2.7
2001	0.3	3.8	4.1	3.1	4.4

From: Derived from data provided by the Defense Manpower Data Center, January 2003.

6. The Trend for Lower First-Term Attrition by JROTC Participants Holds Constant When Recruits Are Examined by Reason for Discharge

The Inter-service Separation Code (ISC) is a DoD-wide designator for classifying an enlisted member's reason for leaving military service. As seen in Table 4.21, the codes are divided into eight groups, with one group (6-8) that includes three subgroups. Most recruits who are discharged prematurely from the military fall into Code 6-8, which is "failure to meet minimum behavioral and performance criteria." (See Table 4.22) Table 4.22 also shows that military members who are discharged from the service will have a Code 6-8 designator as much as 18 percentage points more than any other code during this entire twelve-year period. Table 4.22 also shows that the attrition rates of JROTC participants tend to be lower than those of all recruits for most years and ISC groups; however, exceptions to this trend can be found in every ISC.

Table 4.21. Inter-Service Code (ISC) by Reason for Separation From Military Service.

CODE	REASON FOR SEPARATION
0	unknown reasons for separation related to active service
1	due to a medical disqualification
2	due to dependency or hardship
3	due to death
4	due to a commissioning program
10	due to specific transactions
6-8	due to a failure to meet minimum behavioral and performance criteria.
9	separations or discharges (e.g., erroneous, fraudulent enlistment, pregnancy, etc.)

From: Derived from data provided by the Defense Manpower Data Center, January 2003.

Table 4.22. First-Term (36 Months) Attrition Rates of JROTC Participants and All Recruits by Inter-service Separation Code (ISC), 1990-2001.

ISC		1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
CODE 0	JROTC	6.2	6.5	7.06	5.9	5.9	4.2	5.5	5.2	4.6	4.0	0.6	0.7
	ALL RECRUITS	7.0	9.7	10.8	9.1	8.3	6.4	6.9	5.6	4.9	3.8	0.7	0.1
CODE 1	JROTC	6.3	7.3	6.8	6.4	8.4	7.4	7.1	6.5	6.8	7.0	5.3	4.0
	ALL RECRUITS	6.7	6.9	6.6	6.4	13.7	7.8	7.2	6.3	6.9	6.7	5.4	4.6
CODE 2	JROTC	0.7	0.6	0.6	0.7	0.7	0.4	0.7	0.3	0.4	0.3	0.1	0.3
	ALL RECRUITS	0.8	0.8	0.8	0.8	0.8	0.7	0.6	0.5	0.4	0.4	0.3	0.2
CODE 3	JROTC	0.2	0.2	0.3	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.0
	ALL RECRUITS	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1
						.							
CODE 4	JROTC	0.5	0.6	0.6	0.4	0.4	0.4	0.2	0.3	0.3	0.2	0.2	0.1
	ALL RECRUITS	0.4	0.5	0.5	0.5	0.6	0.6	0.6	0.4	0.5	0.6	0.4	0.3
CODE 10	JROTC	1.4	1.3	1.3	1.0	1.4	1.1	1.3	1.5	1.5	0.7	0.7	0.3
	ALL RECRUITS	1.7	1.4	1.1	1.2	1.2	1.2	1.4	1.8	1.7	1.5	0.7	0.4
CODE 6-8	JROTC	16.0	16.4	16.4	18.3	18.6	20.8	19.3	18.2	18.7	16.0	14.4	9.4
	ALL RECRUITS	16.8	16.9	16.9	18.6	20.1	20.5	19.3	18.8	18.8	18.2	15.6	11.1
CODE 9	JROTC	3.0	3.0	2.9	3.7	2.7	2.8	2.5	3.4	2.9	3.2	2.4	1.6
	ALL RECRUITS	4.3	3.8	3.8	4.9	3.0	2.7	2.7	3.6	2.5	3.6	3.0	1.9
TOTAL	JROTC	34.1	35.8	35.7	36.4	38.0	37.2	36.5	35.4	35.2	31.7	23.6	15.4
	ALL RECRUITS	37.8	40.1	40.6	41.5	41.8	39.7	38.6	37.0	36.4	34.6	25.9	18.4

From: Derived from data provided by the Defense Manpower Data Center, January 2003.

Table 4.23 shows the minorities in Category III-B when controlling for ISC 6-8. It shows Hispanics had consistently lower attrition rates for ISC 6-8 (recruits who fail to

meet the minimum behavioral and performance criteria of the military). However, attrition rates for JROTC participants in the "Other" category were slightly higher than the attrition rates for all recruits in 1992-1993, 1995, and 1998. On the other hand, this same category was 2-6 percentage points lower during the other years. Comparing minorities only, Hispanics in Category III-B had consistently lower attrition rates among JROTC participants from 1992-2000. During this time, the attrition rates for Hispanics were 4-6 percentage points lower than those of any other minority group. JROTC participants in the "Other" category had the lowest attrition rates of all minorities in 1990-1991, 1994, 1996, and 1999.

Table 4.23. First-Term Attrition (36 Months) Rates of JROTC Participants and All Recruits in Armed Forces Qualification Test (AFQT) Category III-B and ISC 6-8, by Race/Ethnicity and Fiscal Year of Entry, 1990-2001.

RACE/ ETHNICITY	**FISCAL YEAR OF ENTRY**											
	1990	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**
WHITE												
JROTC	23.0	20.5	22.0	27.1	25.7	27.0	23.3	23.0	23.0	20.0	18.5	12.4
ALL RECRUITS	20.7	20.5	21.1	24.0	25.4	26.0	25.0	23.0	24.0	23.0	19.7	14.3
BLACK												
JROTC	14.7	16.2	16.7	17.5	18.6	21.0	18.9	17.5	17.7	15.5	13.4	8.2
ALL RECRUITS	16.8	17.8	17.9	19.6	21.0	21.9	19.7	19.4	18.9	18.5	15.7	10.5
HISPANIC												
JROTC	14.0	13.2	12.7	11.3	12.3	14.4	13.1	11.3	13.5	11.7	8.8	7.6
ALL RECRUITS	14.4	14.0	13.6	13.8	15.7	17.1	15.5	14.6	14.7	14.0	11.8	8.7
OTHER												
JROTC	12.3	7.7	17.1	15.7	12.0	17.2	12.6	13.1	15.5	9.8	10.9	4.7
ALL RECRUITS	13.1	13.5	13.3	15.4	15.0	16.1	15.6	15.3	15.0	15.0	12.4	9.4
TOTAL												
JROTC	16.0	16.4	16.5	18.3	18.6	20.8	19.3	18.2	18.7	16.0	14.4	9.4
ALL RECRUITS	18.7	17.3	16.9	18.6	20.1	20.5	19.2	18.8	18.8	18.2	15.6	11.1

From: Derived from data provided by the Defense Manpower Data Center, January 2003.

The first-term attrition rate differences between JROTC participants and all recruits in AFQT Category III-B and ISC 6-8 by race/ethnicity are shown in Table 4.24. As seen here, the attrition rate for JROTC participants in ISC 6-8 are consistently lower than the rates for recruits in these categories, with a few exceptions. In 1992, JROTC participants in the "Other" category had an attrition rate almost 4 percentage points

higher than that of all recruits. On the other hand, the attrition rates of blacks and Hispanics have been consistently lower during this twelve-year period.

Table 4.24. First Term (36 Months) Attrition Rates: Difference Between JROTC Participants and All Recruits in Armed Forces Qualification Test (AFQT) Category III-B and ISC 6-8, by Race/Ethnicity and Fiscal Year of Entry, 1990-2001.

FISCAL YEAR OF ENTRY	RACE				
	WHITE	BLACK	HISPANIC	OTHER	TOTAL
1990	-2.2	2.1	0.4	0.8	2.7
1991	0.0	1.6	0.8	5.8	0.9
1992	-0.9	1.2	0.9	-3.8	0.4
1993	-0.3	2.1	2.5	-0.3	0.3
1994	-0.3	2.4	3.4	3.0	1.5
1995	-0.1	0.9	2.7	-1.1	-0.3
1996	1.7	0.8	2.4	3.0	-0.1
1997	0.0	1.9	3.3	2.2	0.6
1998	1.0	1.2	1.2	-0.5	-0.1
1999	3.0	3.0	2.3	5.2	2.2
2000	1.2	2.3	3.0	1.5	1.2
2001	1.9	2.3	1.1	4.7	1.7

From: Derived from data provided by the Defense Manpower Data Center, January 2003.

B. CHAPTER SUMMARY

This chapter analyzes DoD data on recruits who participated in JROTC. The proportion of JROTC participants who joined the military steadily increased during the 1990s. However, the number of total recruits declined and remained relatively low. The Army has the largest number of recruits who participated in JROTC as well as the largest number of all recruits. Regarding JROTC recruits, the Marine Corps has the second highest number, followed by the Navy and the Air Force. At the same time, the percentage of JROTC participants is highest for the Marine Corps, followed by the Army, Navy, and Air Force, respectively.

Participation in JROTC by women consistently increased during most of the 1990s. In fact, JROTC participation by women was higher than that for men in five of ten years. Participation in JROTC by minorities also increased during most of the 1990s. JROTC participation by blacks increased from 1994-1997. Blacks also had the highest percentage of JROTC participation, and their rate of JROTC participation stood well above the rates of all other groups. JROTC participation by Hispanic recruits increased

from 1990-1993 and from 1994-1996. Furthermore, these rates rose above 4 percent in 1998, 1999, and 2001. Participation rates for minorities in the "Other" category increased from 1990-1992 and again from 1994-1998. As a percentage of all recruits, JROTC rates tend to be highest for AFQT Categories III-B and IV (which has a relatively small number of recruits). Thus, when comparing JROTC participants with all recruits, those who participated in JROTC are more heavily concentrated in AFQT categories below the 50^{th} percentile.

First-term attrition rates for JROTC participants tend to be consistently lower than those of all recruits. Service comparisons show that JROTC participants in the Navy have consistently lower attrition rates. Occasionally, attrition rates for JROTC graduates are higher than those of all recruits; but, even in those cases, the differences between the rates tend to be smaller than the differences that favor JROTC recruits who participated in JROTC.

Additionally, first-term attrition was found to be lower for JROTC participants who are minorities than those who are white. First-term attrition rates for Hispanic JROTC participants were found to be consistently lower than those of all recruits and were also among the lowest of all racial/ethnic groups. Minorities in the "Other" category were also found to have relatively low first-term attrition rates, consistently lower than those for blacks and whites. The attrition rates for black JROTC participants were consistently lower than those for all black recruits. A similar trend is observed for other racial/ethnic minorities.

Compared with all recruits, JROTC participants are relatively concentrated among minorities and in AFQT Category III-B, also exhibiting lower first-term attrition. Among JROTC participants who were minority and in AFQT Category III-B, Hispanics had the lowest attrition rate; those in the "Other" category had first-term attrition rates as much as 16 percentage points lower than those of all other racial/ethnic groups.

Finally, when recruits are examined by reason for discharge, the trend for lower first-term attrition by JROTC participants remains constant. Most recruits who were discharged prematurely fall into ISC Code 6-8, failure to meet minimum behavioral and performance criteria. These types of discharges occurred as much as 18 percentage

points higher than any other type of discharge. With respect to race/ethnicity, Hispanics have consistently lower attrition rates under Code 6-8. Those in the "Other" category have attrition rates slightly higher than those for all recruits in several years.

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V. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

A. SUMMARY

The main objectives of this study were to determine the characteristics of successful youth development programs, describe how JROTC compares to other successful national youth development programs, determine the effectiveness of JROTC as a recruiting tool, and describe how the performance of JROTC graduates who join the military compares to that of other recruits.

This study addresses "youth development" by looking first at how the concept is generally defined, the needs critical to survival and healthy development, and the specific approaches used in programs for certain types of young people. The study also examines the goals and effectiveness of youth development programs and the impact of federal legislation on achieving outcomes. The study then reviews the history of JROTC, JROTC growth trends, the regional distribution of units, JROTC programs of the different military services, and the role of federal legislation in JROTC funding. The study attempts to assess the effectiveness of JROTC, including its performance as a recruiting tool, by looking at both qualitative and quantitative information on program outcomes. Quantitative data on the military recruitment of JROTC graduates were obtained from the Defense Manpower Data Center located in Monterey, California. These data track annual cohorts of recruits through the first three years of their military service. This allows a comparison of JROTC graduates with other recruits on the basis of first-term attrition, or the failure of a recruit to complete his or her first term of service.

Research shows that the development needs of youth include physical activity, competence and achievement, self-definition, positive social interactions with peers and adults, a sense of structure and clear limits, and meaningful participation. Youth development is defined as the process that prepares young people to meet the challenges of adolescence and adulthood through coordinated activities and experiences that help them to become socially, morally, emotionally, physically, and cognitively competent.

With this in mind, youth development programs provide a set of developmentally rich contexts where development can take place safely, and opportunities to grow in multiple areas are stimulated.

Research also shows that effective youth development programs are youth-centered, knowledge-centered, and care-centered and have different affiliations such as national youth-serving organizations, and public/private institutions. On the other hand, studies of youth development programs reveal that these programs are numerous and vary both by structure and affiliation. Furthermore, participation in these youth development programs are influenced by income, gender, race, and access to the program. This degree of variation makes it difficult to determine the relative value of youth development programs. If they are to be seen as possible alternatives to promoting youth development, a common ground of comparison must be found between JROTC and other youth development programs.

The comparison between JROTC and other youth development programs shows that the intended objective is generally similar: to promote the positive development of American youth. Additionally, youth development programs and JROTC are essentially similar in how they view youth development as building character and good citizenship in our nation's youth. All programs further address the broader developmental assets that all children and youth need in becoming solid citizens and successful leaders who can contribute to their communities. Finally, JROTC and other youth development programs similarly strive to strengthen self-esteem, improve physical fitness, promote high school graduation, and, most importantly, keep youth off the streets and out of trouble.

Unlike other youth development programs where participation can be influenced by income, gender, race, and access, JROTC is open to everyone. As mentioned earlier, money, status, or labels are not required for youth to participate in JROTC. Another difference between JROTC and other youth development programs (probably the greatest and most unique of the differences between the two) is its military focus. Also, students who spend 2-3 years in JROTC are rewarded with advanced promotion if they seek enlistment in a military service upon high school graduation.

Data analysis of enlistment trends and the attrition experiences of JROTC participants and non-JROTC participants reveal the following: military enlistment by JROTC graduates increased in the 1990s; first-term attrition is consistently lower for JROTC participants; first-term attrition is lower for JROTC participants who are minorities than for those who are white; first-term attrition is lower for JROTC participants in higher AFQT categories, but differences between JROTC participants and all recruits are greatest in lower AFQT categories; compared with all recruits, JROTC participants are concentrated among minorities and in AFQT Category III-B, exhibiting lower first-term attrition; and the trend of lower first-term attrition by JROTC participants holds constant when recruits are examined by reason for discharge.

B. CONCLUSIONS

Clearly, JROTC is effective in promoting youth development. It was designed as a high school program to instill citizenship values, personal responsibility, service to the United States, and a sense of accomplishment in America's youth. JROTC has units in approximately 2,900 high schools across the nation, with 750 schools waiting to establish a program.

Nevertheless, the study shows that a number of other programs can perform just as well as JROTC in promoting youth development. At the same time, no single program can match JROTC in its size, funding, and scope of accomplishments. Representatives of DoD are not prone to admit in public circles that the primary purpose of JROTC involves military recruiting. Yet, it is hard to deny that the program is a major benefit to recruiting in many respects. JROTC provides a "foot in the door" to many high schools, a presence on campus. The program is placed in full view of the schools and the communities of which they are a part. The program also tends to bring the military closer with the school's administrators, teachers, and guidance counselors, as well as with the program's participants and their families. In some ways, JROTC is a means of educating schools and their students about the military and its place in society; in other ways, at least indirectly, the program itself serves as a "prep school" for the armed forces.

In motivating young people to become better citizens, parents and school officials have provided clear support for JROTC. Students and principals alike believe that

JROTC programs are beneficial to students, as well as to schools, communities, and to the nation. The same cannot be said seriously about many other youth development programs.

From the military's perspective, JROTC cadets have a greater likelihood of joining one of the armed forces after high school--in fact, JROTC graduates are said to be as much as five times more likely than non-cadets to enlist. JROTC is not intended specifically as a recruiting tool, nor does it require any military obligation. However, a sizeable proportion of JROTC cadets still pursue further military training, as data and anecdotal evidence suggest.

One approach in estimating the program's value to recruiting is simply by counting the number of JROTC graduates who eventually enlist in the military. This is not as easy to do as it might appear. JROTC graduates may not decide to enlist in the military directly from high school. In fact, some former JROTC participants may proceed to the civilian job market and then join the military; others may decide to attend college, and some of these may opt to join ROTC. Of those who attend college, some may go on to become military officers, while others may drop out of college (and ROTC) to enlist in the military. Since JROTC graduates who enlist in the military are given advanced pay grade, it is likely that DoD's data on recruits who have completed JROTC are fairly accurate (to the extent that a recruit reports and verifies his or her participation in the program). Missing from the data would be former JROTC participants who complete a portion of ROTC and then enlist, since they are categorized separately, and those who join the officer ranks. (Recall that 8 percent of JROTC graduates, in a recent survey, indicated they intended to seek a commission in the military.)

Over the twelve-year period studied here, about 85,000 enlisted recruits can be identified as having participated in JROTC during high school. This amounts to an average of 7,000 recruits per year. At first glance, the number of recruits may seem relatively small, given that approximately 450,000 students (from more than 2,900 units nationwide) are enrolled in JROTC at any given time. Added to this is the likelihood that a large proportion of high school graduates who once participated in JROTC may have been attracted to the military even without JROTC. This conclusion comes from the fact

that about two-thirds of JROTC units are located in the Southern region of the United States, where propensity to join the military tends to be highest among teenagers and public opinion of the military is very positive. Further, high school students who are drawn to enroll in JROTC may already possess a strongly favorable view of the military and its lifestyle.

In sheer numbers, then, it is difficult to say that JROTC provides a powerful boost to enlisted recruiting. Numbers alone are not sufficient, however, since the quality, as well as the quantity, of the recruits is also important. The present study attempted to assess the "quality" issue by looking at first-term attrition (or failure to complete a first term of service). Here, it was found that the first-term attrition rates of JROTC graduates were consistently lower than those of all recruits who entered the military in a given year. The differences in the attrition rates were expected: previous research suggests that recruits who have a realistic idea of what to expect in the military are generally more adaptable to the military lifestyle and are more likely to complete the first three or four years of service.[139] (It is assumed that certain aspects of JROTC provide students with a "realistic job preview," or RJP, of the military.)

At the same time, it was expected that the attrition rates of JROTC graduates would be considerably lower than the attrition rates of recruits who did not have the benefit of RJP or the assumed greater motivation of recruits who entered with JROTC and some advanced pay grade. Somewhat surprisingly, the differences in the attrition rates between JROTC graduates and all recruits were less than 3 percentage points, on average, for all groups combined across the entire period. Larger differences, favoring JROTC graduates, were found for minorities (especially African-Americans), recruits with enlistment scores below the 50th percentile (especially AFQT Category III-B), and in the Navy.

Without further research, one should be cautious in interpreting the differences in attrition rates. For example, previous studies describe some of the high school students who participate in JROTC as being "at risk," teenagers who require some type of positive intervention. It is possible, then, that young people who participate in JROTC are

[139] Gary D. Brose, "Could Realistic Job Previews Reduce First-Term Attrition?," Master's Thesis, Naval Postgraduate School, Monterey, California, March 1999.

different in several respects from their counterparts who join the military without having the experience of JROTC. Without the positive intervention of JROTC in their lives, the attrition rates of these young people, if they had joined the military, might have been much higher, even well above the rates for all recruits. This theory finds support in the finding that the proportions of recruits who are JROTC graduates are noticeably higher in AFQT Category III-B than in Categories I through III-A (above the 50th percentile); and the JROTC proportions are two to three times higher for African-Americans, and higher for other minorities, than for whites.

Another, more practical way of looking at the results is in economic terms, where otherwise small differences in numbers of recruits or rates of attrition can amount to large savings in money. For example, DoD estimates that it costs an average of $11,000 to recruit a new service member. Additionally, DoD estimates that it costs approximately $35,000 per recruit for initial entry training.[140] Taken together, this means that it costs about $46,000 to recruit and train each new member, just past the first few months of military service. Assuming that it costs less to recruit a JROTC graduate (say, $5,000, including the cost of JROTC), and adding incidental administrative costs associated with discharging a recruit,[141] a 3-percentage-point difference in the attrition rate of JROTC recruits converts to an annual savings to DoD of more than $9 million. This does not account for possible longevity of service (JROTC recruits may reenlist at greater rates than other recruits), other performance indicators while in service, or the initial costs of recruiting (based on the figures above, a savings of roughly $42 million for each annual cohort of JROTC recruits).

Clearly, the present study of DoD data is only a very small first step in exploring the impact of JROTC on recruiting. It merely takes the most direct approach available, counting numbers of recruits who participated in JROTC and analyzing limited information on their first 36 months of service. Much more can be done to get a true sense of how the JROTC program affects recruiting, including how the mere presence of

140 Gerry J. Gilmore, "Daily Briefing: Attrition Rates Dropping At All Military Services," Government Executive Magazine, August 15, 2001, [http://www.govexec.com/dailyfed/0801/081501afps.htm].

141 General Accounting Office, "Military Attrition: DoD Could Save Millions by Better Screening Enlisted Personnel," GAO/NSIAD-97-39, January 6, 1997, [http://www.fas.org/man/gao/nsiad98117.htm].

JROTC in high schools may bring the military closer to communities. One may find in such a study, for instance, that the most important influence of the program on recruiting comes through the enlistment of persons who are exposed to the military through the presence of JROTC in their school or community, or the related access granted to recruiters, or the positive effect of the program on public attitudes, and not directly through the enrollment of some students in the program itself.

C. RECOMMENDATIONS

Based on the findings of this study, further research would be beneficial in several areas. Further research on the impact of JROTC on recruiting should seek to better ascertain the number of recruits who have had some experience in JROTC, including officers as well as enlisted personnel. As previously noted, this may not be a simple task, given limitations in DoD data. In addition, JROTC recruits should be longitudinally tracked through their service careers, assessing various measures of performance, in comparing them with recruits who do not have the experience of JROTC. In this way, the "quality" of the JROTC recruits can be assessed along with their quantity.

Further research should also examine whether JROTC, in building youth competencies and enabling young people to become responsible adults, is also successful for graduates who do not join the military. This type of study would need to first identify JROTC graduates who do not join the military and then follow them longitudinally (or retrospectively) to determine if JROTC had some impact on their lives, and the nature and extent of that impact. Obviously, the determination of impact would be subjective, best expressed in the opinions of the graduates themselves.

Additional research could be undertaken to determine whether drop-out rates and adult job attainment and wage levels can be measured and compared for those who participated in JROTC and those who did not. Such a study would get at the impact of JROTC, on those who did not join the military, eventually dropped out of high school, and their subsequent job attainment and wage level. It would also help to answer questions surrounding any difference in financial benefit of those who participated in JROTC and went to the military and those who participated in JROTC but did not join the military.

Another way of studying the issue of recruiting impact is by taking a larger view of the program and how it may bring the military closer to the high schools and their surrounding communities. Clearly, the program accomplishes more for military recruiting than just influencing the eventual enlistment of some JROTC graduates, who may have already been inclined to join the military. Perhaps, the best approach to studying this would be to survey recruiters in areas that have JROTC, to elicit their views on how the program has affected recruiting. Of particular interest would be recruiters in areas that have recently added a new unit, to obtain a "before" and "after" perspective.

No study of the impact of JROTC on recruiting would be complete without examining costs and savings. The analysis should include possible savings related to first-term attrition and performance in service (as touched upon here), as well as recruiting costs with and without JROTC.

APPENDIX. ISC CATEGORY CODES

	0		1		2		3		4		10		6-8		9		TOTAL	
	JROTC	ALL	JROTC	ALL	JROTC	ALL	JROTC	ALL	JROTC	ALL	JROTC	ALL	JROTC	ALL	JROTC	ALL	JROTC	ALL
YEAR																		
1990																		
6MOS	07	05	306	320	05	07	02	04	00	03	17	27	478	584	105	176	918	1121
1YR	07	05	74	84	11	13	07	04	05	02	28	44	158	222	24	35	310	405
2YR	48	60	132	130	27	32	11	08	36	23	51	58	426	461	84	100	811	868
3YR	554	626	116	140	24	32	04	06	08	15	45	39	535	417	87	115	1369	1386
1991																		
6MOS	05	13	378	346	02	08	02	03	05	04	17	28	539	623	101	181	1046	1201
1YR	04	15	68	86	12	14	02	04	02	04	24	38	180	223	53	39	341	419
2YR	192	382	144	129	25	30	05	07	35	25	47	46	556	508	84	93	1084	1217
3YR	447	560	144	129	20	30	12	06	22	17	37	28	369	334	58	69	1106	1169
1992																		
6MOS	03	14	306	317	03	07	02	03	02	06	12	15	576	687	130	199	1031	1244
1YR	03	08	81	73	08	12	03	04	05	06	36	30	198	214	20	36	350	380
2YR	185	388	143	126	30	28	08	07	23	15	48	42	514	468	75	79	1023	1150
3YR	515	674	147	142	19	28	12	06	20	22	36	26	354	319	67	70	1167	1284
1993																		
6MOS	00	16	290	316	11	06	05	02	02	10	12	19	718	812	228	306	1263	1483
1YR	09	12	58	55	09	12	06	04	03	03	40	38	238	241	36	40	397	401
2YR	155	303	133	127	21	29	03	06	21	15	40	44	497	467	61	70	927	1058
3YR	425	583	156	143	28	29	03	04	09	22	21	21	372	343	40	69	1051	1212
1994																		
6MOS	05	07	389	426	02	07	04	03	05	12	19	23	661	864	105	128	1187	1466
1YR	00	02	69	665	02	12	05	04	04	02	35	33	249	273	41	37	402	426
2YR	32	67	176	131	35	31	08	07	11	19	38	35	464	494	63	70	823	850
3YR	548	756	206	154	30	27	02	05	22	25	44	28	483	377	61	69	1392	1438
1995																		
6MOS	02	07	382	444	05	06	00	02	02	13	08	16	848	905	128	111	1371	1502
1YR	00	01	76	60	05	11	11	04	00	04	30	30	307	308	24	27	450	441
2YR	02	07	111	126	09	24	05	06	26	18	46	44	525	515	67	68	789	804
3YR	415	626	172	145	21	24	02	05	15	20	27	26	401	320	61	60	1111	1223
1996																		
6MOS	03	07	342	403	06	07	00	02	00	13	21	28	798	850	87	113	1254	1419
1YR	00	02	64	54	14	12	02	04	00	04	25	37	287	322	31	31	421	461
2YR	07	09	126	119	19	19	06	06	17	16	52	49	445	439	65	62	733	715
3YR	535	673	181	143	26	19	06	04	05	22	30	27	396	322	65	61	1241	1269
1997																		
6MOS	03	09	312	311	04	10	04	02	00	11	25	47	800	826	148	197	1292	1408
1YR	00	02	53	53	05	08	02	04	00	02	34	46	227	299	31	31	349	440
2YR	07	12	134	127	10	19	08	06	10	14	47	55	469	457	77	71	757	758
3YR	509	526	154	136	15	17	04	04	20	25	39	31	319	296	85	63	1142	1095
1998																		
6MOS	02	10	377	405	05	08	00	03	04	17	25	42	974	945	119	171	1504	1597
1YR	04	02	46	57	05	07	08	04	04	03	34	49	226	267	27	25	350	411
2YR	10	15	119	106	10	15	09	06	09	13	72	61	380	398	77	05	681	676
3YR	441	464	141	119	15	13	04	05	15	21	16	14	292	269	67	52	987	954
1999																		
6MOS	08	18	398	387	07	10	02	02	03	23	04	62	704	816	163	223	1322	1537
1YR	04	03	89	71	07	07	00	05	00	06	33	51	218	269	24	26	372	433
2YR	28	45	86	104	12	13	08	05	04	10	24	25	394	417	73	63	622	678
3YR	359	314	124	105	08	10	08	05	11	16	10	07	279	315	58	46	853	813
2000																		
6MOS	00	08	282	325	03	08	00	03	05	18	36	36	659	692	126	203	1108	1289
1YR	06	03	109	76	05	06	03	03	02	05	08	09	252	272	37	25	419	396
2YR	32	50	106	95	03	10	08	05	05	09	12	11	409	459	61	56	632	692
3YR	08	09	37	39	00	04	03	02	03	06	13	09	118	132	20	14	200	215
2001																		

ISC CATEGORIES 6-8.

1990		6 MONTHS	1 YEAR	2 YEAR	3 YEAR	TOTAL
African American	JROTC	3.55	1.21	3.93	5.90	14.59
	All Recruits	4.61	2.09	4.99	5.14	16.83
Hispanic	JROTC	4.60	1.84	2.07	5.52	14.03
	All Recruits	5.22	2.11	3.63	3.41	14.37
Other	JROTC	3.36	3.36	2.80	2.80	12.32
	All Recruits	5.12	1.66	3.86	3.03	13.07
Total	JROTC	4.78	1.58	4.26	5.35	15.97
	All Recruits	5.84	4.05	4.61	4.17	18.67
1991						
African American	JROTC	3.27	1.71	6.15	5.02	16.15
	All Recruits	4.89	2.22	5.92	4.73	17.76
Hispanic	JROTC	5.10	1.28	4.04	2.77	13.19
	All Recruits	4.95	1.96	4.24	2.80	13.95
Other	JROTC	2.75	1.10	2.20	1.65	7.70
	All Recruits	5.21	1.73	3.87	2.72	13.53
Total	JROTC	5.39	1.80	5.56	3.69	16.44
	All Recruits	6.63	2.23	5.08	3.34	17.28
1992						
African American	JROTC	4.79	2.18	5.53	4.21	16.71
	All Recruits	5.49	2.23	5.89	4.26	17.87
Hispanic	JROTC	4.37	2.47	3.99	1.90	12.73
	All Recruits	5.51	1.81	3.75	2.56	13.63
Other	JROTC	3.02	3.02	8.05	3.02	17.11
	All Recruits	5.43	1.79	3.75	2.36	13.33
Total	JROTC	5.76	1.98	5.14	3.54	16.47
	All Recruits	6.87	2.14	4.68	3.19	16.88
1993						
African American	JROTC	5.59	1.89	5.46	4.56	17.50
	All Recruits	6.81	2.40	5.75	4.63	19.59
Hispanic	JROTC	5.30	1.24	2.30	2.47	11.31
	All Recruits	5.96	1.78	3.34	2.72	13.80
Other	JROTC	4.87	1.09	5.95	3.79	15.70
	All Recruits	6.64	2.02	3.74	2.95	15.35
Total	JROTC	7.18	2.38	4.97	372	18.25
	All Recruits	8.12	2.41	4.67	3.43	18.63
1994						
African American	JROTC	6.02	1.83	4.97	5.74	18.56
	All Recruits	7.58	2.56	5.92	4.97	21.03
Hispanic	JROTC	5.13	1.85	2.67	2.67	12.32
	All Recruits	7.05	2.13	3.50	2.99	15.67
Other	JROTC	4.28	.86	4.28	2.57	11.99
	All Recruits	6.34	1.99	3.63	3.00	14.96
Total	JROTC	6.61	2.49	4.64	4.83	18.57
	All Recruits	8.64	2.73	4.94	3.77	20.08
1995						
African American	JROTC	7.89	2.69	5.51	4.89	20.98
	All Recruits	7.79	2.96	6.06	5.10	21.91
Hispanic	JROTC	5.62	1.88	3.56	3.38	14.44
	All Recruits	7.82	2.38	4.04	2.84	17.08
Other	JROTC	5.27	2.26	5.64	3.99	17.16
	All Recruits	6.90	2.17	4.36	2.71	16.14
Total	JROTC	8.48	3.07	5.25	4.01	20.81
	All Recruits	9.05	3.08	5.15	3.20	20.48

ISC CATEGORIES 6-8 (CONT.)

1996		6 MONTHS	1 YEAR	2 YEAR	3 YEAR	TOTAL
African American	JROTC	6.41	2.70	5.24	4.59	18.94
	All Recruits	7.27	3.18	5.17	4.03	19.65
Hispanic	JROTC	5.37	2.18	2.85	2.69	13.09
	All Recruits	6.72	2.68	3.46	2.64	15.50
Other	JROTC	3.59	2.51	3.23	3.23	12.56
	All Recruits	6.54	2.67	3.38	3.02	15.61
Total	JROTC	7.98	2.87	4.45	3.96	19.26
	All Recruits	8.50	3.22	4.29	3.22	19.23
1997						
African American	JROTC	6.76	2.01	5.34	3.40	17.51
	All Recruits	7.39	2.76	5.46	3.81	19.42
Hispanic	JROTC	4.07	1.66	3.31	2.26	11.30
	All Recruits	6.42	2.40	3.54	2.25	14.61
Other	JROTC	4.73	1.95	4.17	2.23	13.08
	All Recruits	6.41	2.76	3.65	2.60	15.32
Total	JROTC	8.00	2.27	4.69	3.19	18.15
	All Recruits	8.26	2.99	4.57	2.96	18.78
1998						
African American	JROTC	8.73	1.93	4.04	2.95	17.65
	All Recruits	8.41	2.50	4.54	3.40	18.85
Hispanic	JROTC	6.05	2.65	3.03	1.77	13.50
	All Recruits	7.49	2.12	2.89	2.20	14.70
Other	JROTC	6.55	2.58	3.28	3.04	15.45
	All Recruits	6.95	2.55	3.13	2.35	14.98
Total	JROTC	9.74	2.26	3.80	2.92	18.72
	All Recruits	9.45	2.67	3.98	2.69	18.79
1999						
African American	JROTC	5.92	1.90	4.26	3.37	15.45
	All Recruits	7.27	2.57	4.67	3.98	18.49
Hispanic	JROTC	6.01	2.41	1.93	1.33	11.68
	All Recruits	6.40	2.02	3.05	2.57	14.04
Other	JROTC	3.43	2.11	3.43	.79	9.76
	All Recruits	6.17	2.55	3.74	2.56	15.02
Total	JROTC	7.04	2.18	3.94	2.79	15.95
	All Recruits	8.16	2.69	4.17	3.15	18.17
2000						
African American	JROTC	5.47	2.46	4.37	1.11	13.41
	All Recruits	6.27	2.47	5.38	1.56	15.68
Hispanic	JROTC	4.63	1.72	2.12	.40	8.87
	All Recruits	5.35	2.10	3.38	.99	11.82
Other	JROTC	3.84	2.95	2.36	1.77	10.92
	All Recruits	5.11	2.58	3.47	1.27	12.43
Total	JROTC	6.59	2.52	4.09	1.18	14.38
	All Recruits	6.92	2.72	4.59	1.32	15.55
2001						
African American	JROTC	4.78	1.61	1.76	1.76	8.15
	All Recruits	6.06	2.21	2.18	2.18	10.45
Hispanic	JROTC	5.34	1.19	1.07	1.07	7.60
	All Recruits	5.07	1.99	1.64	1.64	8.70
Other	JROTC	2.95	1.48	.30	.30	4.73
	All Recruits	4.97	2.51	1.92	1.92	9.40
Total	JROTC	5.59	2.22	1.54	1.54	9.35
	All Recruits	6.47	2.54	2.05	2.05	11.06

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